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PATENT

CASE 3202/2

NEW APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF:

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TITLE: SUBSTITUTED POLYCYCLIC ARYL AND HETEROARYL PYRIDONES  
USEFUL FOR SELECTIVE INHIBITION OF THE COAGULATION CASCADE

Commissioner of Patents and Trademarks  
Washington, D. C. 20231

Sir:

Transmitted herewith for filing is the above-identified patent application which, in accordance with 37 CFR 1.51, comprises:

- ☒ Abstract and Specification including 214 Claims
- ☐ An Assignment of the application and a Declaration and Power of Attorney
- ☒ An Assignment of the application and a Declaration and Power of Attorney to follow under separate cover
- ☐ Sheets of formal/informal drawings \_\_.
- ☒ Post Card
- ☐ Prior Art Statement (37 CFR 1.97)
- ☐ Preliminary Amendment
- ☒ A **triplicate** copy of this transmittal paper is enclosed.
- ☒ The present application claims priority under Title 35, United States Code §119 and §120, from United States Patent Application Serial No. 09/574,740, filed May 18, 2000, and United States Provisional Patent Application Serial No. 60/134,811, filed May 19, 1999.

[X] Amend the specification by inserting before the first line the sentence: -- This is a continuation-in-part of United States patent application Serial No. 09/574,740, filed May 18, 2000, which claims priority from United States Provisional Patent Application Serial No. 60/134,811, filed May 19, 1999. --

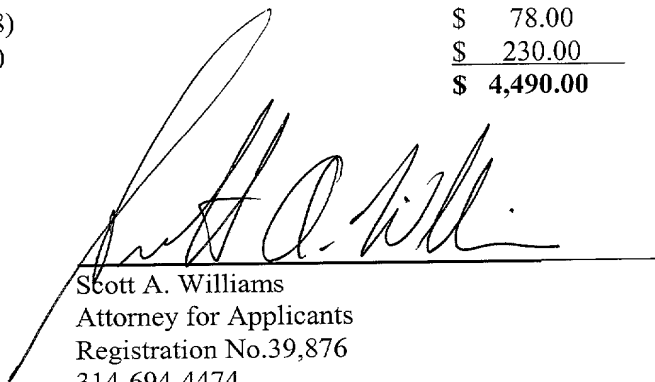
The Commissioner is hereby authorized and requested to charge any fees\* in addition to the above as well as all future fees set forth in 37 CFR 1.16 and 1.17 which may be required during the entire pendency of this Application, and credit any overcharges to Deposit Account No. 19-1025.

NOTE: THIS AUTHORIZATION DOES NOT INCLUDE FEES REQUIRED UNDER 37 CFR 1.18

\* Calculated as follows:

Basic Fee	\$ 690.00
Total Claims in Excess of 20 X \$18 (194 X \$18)	\$ 3492.00
Independent Claims in Excess of 3 X \$78 (1 X \$78)	\$ 78.00
Surcharge for Multiple Dependent Claim(s) (\$260)	\$ 230.00
FILING FEE	<u>\$ 4,490.00</u>

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## **Substituted Polycyclic Aryl and Heteroaryl Pyridones Useful for Selective Inhibition of the Coagulation Cascade**

### **Field of the Invention**

5           This invention is in the field of anticoagulant therapy, and specifically  
relates to compounds, compositions and methods for preventing and treating  
thrombotic conditions such as coronary artery and cerebrovascular disease.  
More particularly, the invention relates to substituted polycyclic aryl and  
heteroaryl pyridone compounds that inhibit serine proteases of the coagulation  
10 cascade.

### **Background of the Invention**

Physiological systems control the fluidity of blood in mammals  
[Majerus, P. W. et al: Anticoagulant, Thrombolytic, and Antiplatelet Drugs. In  
15 Hardman, J. G. and Limbird, L. E., editors: Goodman & Gilman's The  
Pharmacological Basis of Therapeutics. 9th edition. New York, McGraw-Hill  
Book Co., 1996, pp. 1341-1343]. Blood must remain fluid within the vascular  
systems and yet be able to undergo hemostasis, cessation of blood loss from a  
damaged vessel, quickly. Hemostasis or clotting begins when platelets first  
20 adhere to macromolecules in subendothelial regions of an injured and/or  
damaged vessels. These platelets aggregate to form the primary hemostatic  
plug and stimulate local activation of plasma coagulation factors leading to  
generation of a fibrin clot that reinforces the aggregated platelets.

Plasma coagulation factors include factors II, V, VII, VIII, IX, X, XI, and  
25 XII; these are also called protease zymogens. These coagulation factors or  
protease zymogens are activated by serine proteases leading to coagulation in a  
so called "coagulation cascade" or chain reaction [Handin, R. I.: Bleeding and  
Thrombosis. In Wilson, J., et al. editors: Harrison's Principles of Internal  
Medicine. 12th Edition, New York, McGraw-Hill Book Co., 1991, p.350].  
30 Coagulation or clotting occurs in two ways through different pathways. An  
intrinsic or contact pathway leads from XII to XIIa to XIa to IXa and to the  
conversion of X to Xa. Xa with factor Va converts prothrombin (II) to  
thrombin (IIa) leading to conversion of fibrinogen to fibrin. Polymerization of  
fibrin leads to a fibrin clot. An extrinsic pathway is initiated by the conversion  
35 of coagulation factor VII to VIIa by Xa. The presence of Tissue Factor and

VIIa accelerates formation of Xa in the presence of calcium ion and phospholipids. Formation of Xa leads to thrombin, fibrin, and a fibrin clot as described above. The presence of one or more of these many different coagulation factors and two distinct pathways of clotting could enable the efficacious, selective control and better understanding of parts of the coagulation or clotting process.

While clotting as a result of an injury to a blood vessel is a critical physiological process for mammals such as man, clotting can also lead to disease states. A pathological process called thrombosis results when platelet aggregation and/or a fibrin clot blocks (i.e., occludes) a blood vessel. Arterial thrombosis may result in ischemic necrosis of the tissue supplied by the artery. When the thrombosis occurs in a coronary artery, a myocardial infarction or heart attack can result. A thrombosis occurring in a vein may cause tissues drained by the vein to become edematous and inflamed. Thrombosis of a deep vein may be complicated by a pulmonary embolism. Preventing or treating clots in a blood vessel may be therapeutically useful by inhibiting formation of blood platelet aggregates, inhibiting formation of fibrin, inhibiting thrombus formation, inhibiting embolus formation, and for treating or preventing unstable angina, refractory angina, myocardial infarction, transient ischemic attacks, atrial fibrillation, thrombotic stroke, embolic stroke, deep vein thrombosis, disseminated intravascular coagulation, ocular build up of fibrin, and reocclusion or restenosis of recanalized vessels.

There have been several reports of non-peptidic and peptidic pyridone compounds that act as an inhibitor of a coagulation factor present in the coagulation cascade or clotting process. In PCT Patent Application WO 98/47876, Van Boeckel et al. describe peptidic 6-alkylpyridones and 2-alkylpyrimidinones as anti-thrombotic compounds. In PCT Patent Application WO 98/16547, Zhu and Scarborough describe 3-(N-heterocyclamino)-4,5,6-substituted-pyridonylacetamides and 2,4-substituted-5-(N-heterocyclamino)-pyrimidinonyl-acetamides containing amide substituents and having activity against mammalian factor Xa. In US Patent 5,656,645, Tamura et al. describe 4,5,6-substituted-3-aminopyridonyl-acetamides, 1,6-substituted-5-aminouracinylnacetamides, and 2,4-substituted-5-aminopyrimidinonyl-acetamides containing amide substituents having a formyl function and having activity against thrombin. In US Patent 5,658,930, Tamura et al. again describe



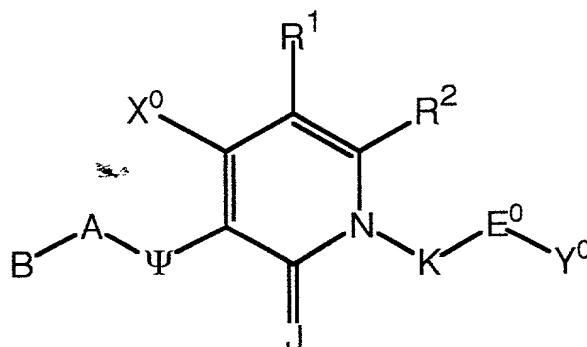
4,5,6-substituted-3-aminopyridonyl-acetamides, 1,6-substituted-5-aminouracinyllacetamides, and 2,4-substituted-5-aminopyrimidinonyl-acetamides containing amide substituents having a formyl function and having activity against thrombin. In PCT Patent Applications 96/18644 and 97/46207, 5 Tamura et al. further describe 4,5,6-substituted-3-aminopyridonylacetamides, 1,6-substituted-5-aminouracinyll-acetamides, and 2,4-substituted-5-amino-pyrimidinonyllacetamides containing amide substituents having a formyl function and having activity against thrombin. In PCT Patent Application WO 98/09949, Suzuki et al. describe 2-heterocyclylacetamido derivatives of 1,2- 10 diketones and report that they inhibit proteases, especially chymase inhibitors. In US Patent 5,668,289, Sanderson et al. describe 6-alkyl, 6-cycloalkyl, and 6-trifluoromethyl pyridones unsubstituted at the 4 and 5 positions and reported to inhibit thrombin. In PCT Patent Application WO 97/01338, Sanderson et al. describe 6-alkyl, 6-cycloalkyl, and 6-trifluoromethyl pyridones unsubstituted at 15 the 4 and 5 positions and reported to inhibit thrombin. In US Patent 5,792,779, Sanderson et al. describe substituted 4,6-alkyl, 4,6-cycloalkyl, and 4,6-trifluoromethyl pyridones having utility as thrombin inhibitors. In PCT Patent Application WO 97/30708, Sanderson et al. describe additional substituted 4,6-alkyl, 4,6-cycloalkyl, and 4,6-trifluoromethyl pyridones having utility as 20 thrombin inhibitors. In US Patent 5,869,487, Coburn et al. describe pyrido[3,4-B]pyrazines containing a fused 6-methylpyridone functionality and having utility as thrombin inhibitors. In PCT Patent Application WO 98/31670, Sanderson et al. describe additional 4-substituted 6-alkyl, 6-cycloalkyl, and 6-trifluoromethyl pyridones having utility as thrombin inhibitors. In PCT Patent 25 Application WO 98/17274, Coburn et al. disclose substituted 3,4-diamino-6-methylpyridones having utility as human thrombin inhibitors. In PCT Patent Application WO 98/42342, Isaacs et al. describe additional 6-alkyl, cycloalkyl, and trifluoromethyl substituted pyridones and pyrazinones reported to inhibit human thrombin.

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### Summary of the Invention

It is an object of the present invention to provide compounds that are beneficial in anticoagulant therapy and that have a general structure:



Formula (I).

5

It is another object of the present invention to provide methods for preventing and treating thrombotic conditions, such as coronary artery disease, cerebrovascular disease, and other coagulation related disorders. Such thrombotic conditions are prevented and treated by administering to a patient in need thereof an effective amount of compounds of Formula (I).

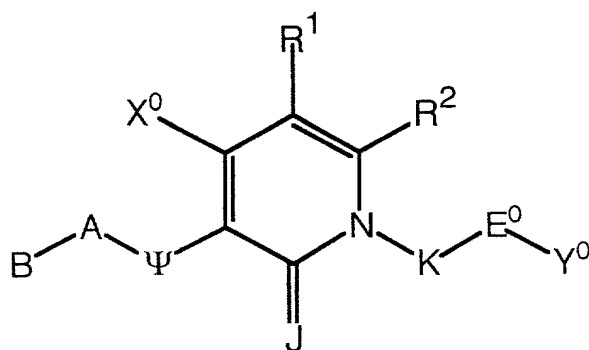
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Various other objects and advantages of the present invention will become apparent from the following description of the invention.

### Description of the Invention

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The present invention relates to a class of compounds comprising Substituted Polycyclic Aryl and Heteroaryl Pyridones, which are beneficial in anticoagulant therapy for the treatment and prevention of a variety of thrombotic conditions including coronary artery and cerebrovascular disease, as given in Formula (I):



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(I)

or a pharmaceutically acceptable salt thereof, wherein;

J is selected from the group consisting of O and S;

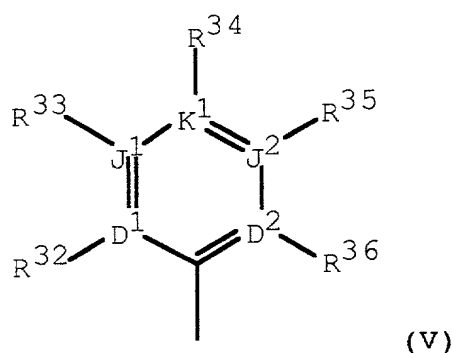
J is optionally selected from the group consisting of  $\text{CH-R}^6$  and  $\text{N-R}^6$

wherein  $\text{R}^6$  is a linear spacer moiety having a chain length of 1 to 4 atoms

linked to the point of bonding of a substituent selected from the group

- 5 consisting of  $\text{R}^{4a}$ ,  $\text{R}^{4b}$ ,  $\text{R}^{39}$ ,  $\text{R}^{40}$ ,  $\text{R}^5$ ,  $\text{R}^{14}$ , and  $\text{R}^{15}$  to form a heterocyclyl ring having 5 through 8 members;

B is formula (V):



(V)

wherein  $\text{D}^1$ ,  $\text{D}^2$ ,  $\text{J}^1$ ,  $\text{J}^2$  and  $\text{K}^1$  are independently selected from the group

- 10 consisting of C, N, O, S and a covalent bond with the provisos that no more than one is a covalent bond, no more than one of  $\text{D}^1$ ,  $\text{D}^2$ ,  $\text{J}^1$ ,  $\text{J}^2$  and  $\text{K}^1$  is O, no more than one of  $\text{D}^1$ ,  $\text{D}^2$ ,  $\text{J}^1$ ,  $\text{J}^2$  and  $\text{K}^1$  is S, one of  $\text{D}^1$ ,  $\text{D}^2$ ,  $\text{J}^1$ ,  $\text{J}^2$  and  $\text{K}^1$  must be a covalent bond when two of  $\text{D}^1$ ,  $\text{D}^2$ ,  $\text{J}^1$ ,  $\text{J}^2$  and  $\text{K}^1$  are O and S, and no more than four of  $\text{D}^1$ ,  $\text{D}^2$ ,  $\text{J}^1$ ,  $\text{J}^2$  and  $\text{K}^1$  are N, with the provisos that  $\text{D}^1$ ,  
 15  $\text{D}^2$ ,  $\text{J}^1$ ,  $\text{J}^2$  and  $\text{K}^1$  are selected to maintain an aromatic ring system and that  $\text{R}^{32}$ ,  $\text{R}^{33}$ ,  $\text{R}^{34}$ ,  $\text{R}^{35}$ , and  $\text{R}^{36}$  are each independently selected to maintain the tetravalent nature of carbon, trivalent nature of nitrogen, the divalent nature of sulfur, and the divalent nature of oxygen;

$\text{R}^9$ ,  $\text{R}^{10}$ ,  $\text{R}^{11}$ ,  $\text{R}^{12}$ ,  $\text{R}^{13}$ ,  $\text{R}^{16}$ ,  $\text{R}^{17}$ ,  $\text{R}^{18}$ ,  $\text{R}^{19}$ ,  $\text{R}^{32}$ ,  $\text{R}^{33}$ ,  $\text{R}^{34}$ ,  $\text{R}^{35}$ , and

- 20  $\text{R}^{36}$  are independently selected from the group consisting of heterocyclalkoxy, N-alkyl-N-arylamino, heterocyclylamino,

- heterocyclylalkylamino, hydrido, acetamido, haloacetamido, amidino, guanidino, dialkylsulfonium, trialkylphosphonium, dialkylsulfoniumalkyl, carboxy, heteroaralkylthio, haloalkylthio, alkanoyloxy, alkoxy, alkoxyalkyl, haloalkoxyalkyl, heteroaralkoxy, cycloalkylamino, acylalkyl, acylalkoxy, aryloylalkoxy, heterocyclyloxy, aralkylaryl, aralkyl, aralkenyl, aralkynyl, heterocyclyl, perhaloaralkyl, aralkylsulfonyl, aralkylsulfonylalkyl, aralkylsulfinyl, aralkylsulfinylalkyl, halocycloalkyl, halocycloalkenyl, cycloalkylsulfinyl, cycloalkylsulfinylalkyl, cycloalkylsulfonyl, cycloalkylsulfonylalkyl, heteroarylramino, N-heteroarylramino-N-alkylramino, heteroaralkylramino, cycloalkoxy, cycloalkenylloxy, cycloalkoxyalkyl, cycloalkylalkoxy, cycloalkenylloxyalkyl, cycloalkylenedioxy, halocycloalkoxy, halocycloalkoxyalkyl, halocycloalkenylloxy, halocycloalkenylloxyalkyl, hydroxy, amino, alkoxyamino, thio, nitro, alkylramino, alkylthio, alkylthioalkyl, arylramino, aralkylramino, arylthio, arylthioalkyl, heteroaralkoxyalkyl, alkylsulfinyl, alkylsulfinylalkyl, arylsulfinylalkyl, arylsulfonylalkyl, heteroarylulfinylalkyl, heteroarylulfonylalkyl, alkylsulfonyl, alkylsulfonylalkyl, haloalkylulfinylalkyl, haloalkylulfonylalkyl, alkylsulfonamido, alkylaminosulfonyl, amidosulfonyl, monoalkyl amidosulfonyl, dialkyl amidosulfonyl, monoarylaminidosulfonyl, arylsulfonamido, diarylamidosulfonyl, monoalkyl monoaryl amidosulfonyl, arylsulfinyl, arylsulfonyl, heteroarylthio, heteroarylulfinyl, heteroarylulfonyl, heterocyclylulfonyl, heterocyclylthio, alkanoyl, alkenoyl, aroyl, heteroaroyl, aralkanoyl, heteroaralkanoyl, haloalkanoyl, alkyl, alkenyl, alkynyl, alkenylloxy, alkenylloxyalkyl, alkylenedioxy, haloalkylenedioxy, cycloalkyl, cycloalkylalkanoyl, cycloalkenyl, cycloalkylalkyl, cycloalkenylalkyl, halo, haloalkyl, haloalkenyl, haloalkoxy, hydroxyhaloalkyl, hydroxyaralkyl, hydroxyalkyl, alkylenylramino, hydroxyheteroaralkyl, haloalkoxyalkyl, aryl, aralkyl, arylloxy, aralkoxy, arylloxyalkyl, saturated heterocyclyl, partially saturated heterocyclyl, heteroaryl, heteroarylloxy, heteroarylloxyalkyl, heteroarylalkyl, arylalkenyl, heteroarylalkenyl, carboxyalkyl, carboalkoxy, alkoxycarboxamido, alkylamidocarbonylamido, arylamidocarbonylamido, carboalkoxyalkyl, carboalkoxyalkenyl, carboxy, carboaralkoxy, carboxamido, carboxamidoalkyl, cyano, carbohaloalkoxy, phosphono, phosphonoalkyl, diaralkoxyphosphono, and diaralkoxyphosphonoalkyl;

$R^{16}, R^{19}, R^{32}, R^{33}, R^{34}, R^{35}$ , and  $R^{36}$  are independently optionally

$Q^b$ ;

$R^{32}$  and  $R^{33}$ ,  $R^{33}$  and  $R^{34}$ ,  $R^{34}$  and  $R^{35}$ , and  $R^{35}$  and  $R^{36}$  are

- independently optionally selected to form a spacer pair wherein a spacer pair is  
 5 taken together to form a linear moiety having from 3 through 6 atoms  
 connecting the points of bonding of said spacer pair members to form a ring  
 selected from the group consisting of a cycloalkenyl ring having 5 through 8  
 members, a partially saturated heterocyclyl ring having 5 through 8 members, a  
 heteroaryl ring having 5 through 6 members, and an aryl with the proviso that  
 10 no more than one of the group consisting of spacer pairs  $R^{32}$  and  $R^{33}$ ,  $R^{33}$   
 and  $R^{34}$ ,  $R^{34}$  and  $R^{35}$ , and  $R^{35}$  and  $R^{36}$  can be used at the same time;

$R^9$  and  $R^{10}$ ,  $R^{10}$  and  $R^{11}$ ,  $R^{11}$  and  $R^{12}$ , and  $R^{12}$  and  $R^{13}$  are

- independently optionally selected to form a spacer pair wherein a spacer pair is  
 taken together to form a linear moiety having from 3 through 6 atoms  
 15 connecting the points of bonding of said spacer pair members to form a ring  
 selected from the group consisting of a cycloalkenyl ring having 5 through 8  
 members, a partially saturated heterocyclyl ring having 5 through 8 members, a  
 heteroaryl ring having 5 through 6 members, and an aryl with the proviso that  
 no more than one of the group consisting of spacer pairs  $R^9$  and  $R^{10}$ ,  $R^{10}$  and  
 20  $R^{11}$ ,  $R^{11}$  and  $R^{12}$ , and  $R^{12}$  and  $R^{13}$  can be used at the same time;

- B is optionally selected from the group consisting of hydrido,  
 trialkylsilyl, C2-C8 alkyl, C3-C8 alkylenyl, C3-C8 alkenyl, C3-C8 alkynyl, C2-  
 C8 haloalkyl, and C3-C8 haloalkenyl wherein each member of group B is  
 optionally substituted at any carbon up to and including 6 atoms from the point  
 25 of attachment of B to A with one or more of the group consisting of  $R^{32}$ ,  $R^{33}$ ,  
 $R^{34}$ ,  $R^{35}$ , and  $R^{36}$ ;

B is optionally selected from the group consisting of C3-C15  
 cycloalkyl, C5-C10 cycloalkenyl, C4-C12 saturated heterocyclyl, and C4-C9  
 partially saturated heterocyclyl, wherein each ring carbon is optionally

- substituted with  $R^{33}$ , a ring carbon other than the ring carbon at the point of attachment of B to A is optionally substituted with oxo provided that no more than one ring carbon is substituted by oxo at the same time, ring carbons and a nitrogen adjacent to the carbon atom at the point of attachment are optionally
- 5 substituted with  $R^9$  or  $R^{13}$ , a ring carbon or nitrogen adjacent to the  $R^9$  position and two atoms from the point of attachment is optionally substituted with  $R^{10}$ , a ring carbon or nitrogen adjacent to the  $R^{13}$  position and two atoms from the point of attachment is optionally substituted with  $R^{12}$ , a ring carbon or nitrogen three atoms from the point of attachment and adjacent to the  $R^{10}$
- 10 position is optionally substituted with  $R^{11}$ , a ring carbon or nitrogen three atoms from the point of attachment and adjacent to the  $R^{12}$  position is optionally substituted with  $R^{33}$ , and a ring carbon or nitrogen four atoms from the point of attachment and adjacent to the  $R^{11}$  and  $R^{33}$  positions is optionally substituted with  $R^{34}$ ;
- 15 A is selected from the group consisting of single covalent bond,  $(W^7)_{rr}-(CH(R^{15}))_{pa}$  and  $(CH(R^{15}))_{pa}-(W^7)_{rr}$  wherein  $rr$  is an integer selected from 0 through 1,  $pa$  is an integer selected from 0 through 6, and  $W^7$  is selected from the group consisting of O, S, C(O), C(S), C(O)S, C(S)O, C(O)N( $R^7$ ), C(S)N( $R^7$ ), ( $R^7$ )NC(O), ( $R^7$ )NC(S), S(O), S(O)<sub>2</sub>, S(O)<sub>2</sub>N( $R^7$ ),
- 20 ( $R^7$ )NS(O)<sub>2</sub>, P(O)( $R^8$ ), N( $R^7$ )P(O)( $R^8$ ), P(O)( $R^8$ )N( $R^7$ ), C(N $R^7$ )N( $R^7$ ), ( $R^7$ )NC(N $R^7$ ), ( $R^7$ )NC(N $R^7$ )N $R^7$ , and N( $R^7$ ) with the proviso that no more than one of the group consisting of  $rr$  and  $pa$  can be 0 at the same time;
- $R^7$  and  $R^8$  are independently selected from the group consisting of hydrido, hydroxy, alkyl, acyl, aroyl, heteroaroyl, and alkoxyalkyl;

$R^{14}$ ,  $R^{15}$ ,  $R^{37}$ , and  $R^{38}$  are independently selected from the group consisting of hydrido, hydroxy, halo, cyano, hydroxyalkyl, alkoxy, alkyl, alkoxyalkyl, cycloalkyl, cycloalkylalkyl, cycloalkenyl, cycloalkenylalkyl, haloalkyl, haloalkenyl, haloalkoxy, haloalkoxyalkyl, haloalkenyloxyalkyl, 5 halocycloalkoxy, halocycloalkoxyalkyl, halocycloalkenyloxyalkyl, carboxy, carboxyalkyl, carboalkoxy, carboxamido, and carboxamidoalkyl, wherein  $R^{38}$  is optionally substituted at from one through three of the ring carbons with a substituent selected from the group consisting of  $R^{16}$ ,  $R^{17}$ ,  $R^{18}$ , and  $R^{19}$ ;

$R^{14}$  and  $R^{38}$  can be independently selected from the group consisting 10 of acyl, aroyl, and heteroaroyl with the proviso that acyl is selected from other than formyl and 2-oxoacyl and  $R^{38}$  is optionally substituted at from one through three of the ring carbons with a substituent selected from the group consisting of  $R^{16}$ ,  $R^{17}$ ,  $R^{18}$ , and  $R^{19}$ ;

$\Psi$  is selected from the group consisting of  $NR^5$ , O, C(O), C(S), S, 15 S(O), S(O)<sub>2</sub>, ON( $R^5$ ), P(O)( $R^8$ ), and CR<sup>39</sup>R<sup>40</sup>;

$R^5$  is selected from the group consisting of hydrido, hydroxy, amino, alkyl, alkoxy, alkoxyalkyl, haloalkyl, acyl, aroyl, and heteroaroyl;

$R^{39}$  and  $R^{40}$  are independently selected from the group consisting of 20 hydrido, hydroxy, halo, cyano, hydroxyalkyl, acyl, aroyl, heteroaroyl, acylamido, alkoxy, alkyl, alkoxyalkyl, haloalkyl, haloalkoxy, haloalkoxyalkyl, alkylsulfonyl, haloalkylsulfonyl, carboxy, carboxyalkyl, carboalkoxy, carboxamido, and carboxamidoalkyl;

$R^1$ ,  $R^2$  and  $X^0$  are independently selected from the group consisting of 25  $Z^0$ -Q, hydrido, alkyl, alkenyl, and halo;

$R^1$  and  $X^0$  are independently optionally selected from the group consisting of amino, aminoalkyl, alkylamino, amidino, guanidino, hydroxy, hydroxyamino, alkoxy, hydroxyalkyl, alkoxyamino, thiol, alkylthio,

dialkylsulfonium, trialkylphosphonium, dialkylsulfoniumalkyl, heteroaryl-amino, nitro, arylamino, aralkylamino, alkanoyl, alkenoyl, aroyl, heteroaroyl, aralkanoyl, heteroaralkanoyl, haloalkanoyl, hydroxyhaloalkyl, cyano, and phosphono;

- 5  $X^0$  and  $R^1$  or  $R^1$  and  $R^2$  is optionally  $-W=X-Y=Z-$  wherein  $-W=X-Y=Z-$  forms an aryl or C5-C6 heteroaryl;

- W, X, Y, and Z are independently selected from the group consisting of  $C(R^9)$ ,  $C(R^{10})$ ,  $C(R^{11})$ ,  $C(R^{12})$ , N,  $N(R^{10})$ , O, S, and a covalent bond with the provisos that one of W, X, Y, and Z is independently selected to be a covalent bond when one of W, X, Y, and Z is O or S, no more than one of W, X, Y, and Z is optionally O or S, and no more than three of W, X, Y, and Z are optionally N or  $N(R^{10})$ ;

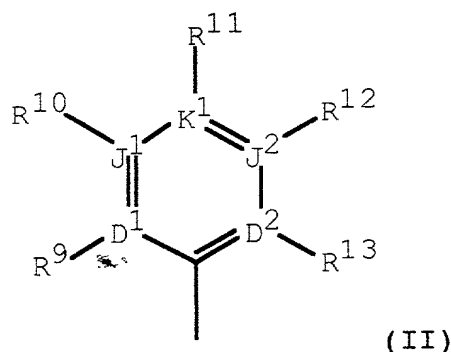
- 10  $X^0$  and  $R^1$  or  $R^1$  and  $R^2$  is optionally bonded together to form C5-C8 cycloalkenyl ring or a partially saturated C5-C8 heterocyclyl ring, wherein said ring is optionally substituted with one or more of the group consisting of  $R^9$ ,  $R^{10}$ ,  $R^{11}$ ,  $R^{12}$ , and  $R^{13}$ ;

- $Z^0$  is selected from the group consisting of covalent single bond,  $(CR^{41}R^{42})_q$  wherein q is an integer selected from 1 through 6,  $(CH(R^{41}))_g-W^0-(CH(R^{42}))_p$  wherein g and p are integers independently selected from 0 through 3 and  $W^0$  is selected from the group consisting of O, S, C(O), C(S), C(O)O, C(S)O, C(O)S, C(S)S, C(O) $N(R^{41})$ ,  $(R^{41})NC(O)$ , C(S) $N(R^{41})$ ,  $(R^{41})NC(S)$ , OC(O) $N(R^{41})$ ,  $(R^{41})NC(O)O$ , SC(S) $N(R^{41})$ ,  $(R^{41})NC(S)S$ , SC(O) $N(R^{41})$ ,  $(R^{41})NC(O)S$ , OC(S) $N(R^{41})$ ,  $(R^{41})NC(S)O$ ,  $N(R^{42})C(O)N(R^{41})$ ,  $(R^{41})NC(O)N(R^{42})$ ,  $N(R^{42})C(S)N(R^{41})$ ,  $(R^{41})NC(S)N(R^{42})$ , S(O), S(O)<sub>2</sub>, S(O)<sub>2</sub> $N(R^{41})$ ,  $N(R^{41})S(O)_2$ , Se, Se(O), Se(O)<sub>2</sub>, Se(O)<sub>2</sub> $N(R^{41})$ ,  $N(R^{41})Se(O)_2$ , P(O)(R<sup>8</sup>),  $N(R^7)P(O)(R^8)$ ,
- 20  
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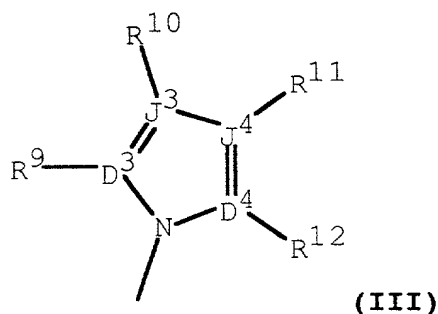
- $P(O)(R^8)N(R^7)$ ,  $N(R^{41})$ ,  $ON(R^{41})$ , and  $SiR^{28}R^{29}$ , and  $(CH(R^{41}))_e-W^{22}$ -  
 $(CH(R^{42}))_h$  wherein e and h are integers independently selected from 0  
 through 2 and  $W^{22}$  is selected from the group consisting of  $CR^{41}=CR^{42}$ ,  
 $CR^{41}R^{42}=C$ ; vinylidene), ethynylidene ( $C\equiv C$ ; 1,2-ethynyl), 1,2-cyclopropyl,  
 1,2-cyclobutyl, 1,2-cyclohexyl, 1,3-cyclohexyl, 1,2-cyclopentyl, 1,3-cyclopentyl,  
 2,3-morpholinyl, 2,4-morpholinyl, 2,6-morpholinyl, 3,4-morpholinyl, 3,5-  
 morpholinyl, 1,2-piperazinyl, 1,3-piperazinyl, 2,3-piperazinyl, 2,6-piperazinyl,  
 1,2-piperidinyl, 1,3-piperidinyl, 2,3-piperidinyl, 2,4-piperidinyl, 2,6-piperidinyl,  
 3,4-piperidinyl, 1,2-pyrrolidinyl, 1,3-pyrrolidinyl, 2,3-pyrrolidinyl, 2,4-  
 pyrrolidinyl, 2,5-pyrrolidinyl, 3,4-pyrrolidinyl, 2,3-tetrahydrofuranyl, 2,4-  
 tetrahydrofuranyl, 2,5-tetrahydrofuranyl, and 3,4-tetrahydrofuranyl, with the  
 provisos that  $R^{41}$  and  $R^{42}$  are selected from other than halo and cyano when  
 directly bonded to N,  $Z^0$  is directly bonded to the pyridone ring, and  $W^{22}$  is  
 optionally substituted with one or more substituents selected from the group  
 consisting of  $R^9$ ,  $R^{10}$ ,  $R^{11}$ ,  $R^{12}$ , and  $R^{13}$ ;
- $R^{41}$  and  $R^{42}$  are independently selected from the group consisting of  
 amidino, hydroxyamino, hydrido, hydroxy, amino, halo, cyano, aryloxy,  
 hydroxyalkyl, acyl, aroyl, heteroaroyl, heteroaryloxyalkyl, alkoxy, alkyl, aryl,  
 aralkyl, aryloxyalkyl, aralkoxyalkylalkoxy, alkoxyalkyl, heteroaryloxyalkyl,  
 cycloalkyl, cycloalkylalkyl, cycloalkylalkenyl, cycloalkenyl, cycloalkenylalkyl,  
 haloalkyl, haloalkenyl, halocycloalkyl, halocycloalkenyl, haloalkoxy,  
 haloalkoxyalkyl, haloalkenyloxyalkyl, halocycloalkoxy, halocycloalkoxyalkyl,  
 halocycloalkenyloxyalkyl, saturated heterocyclyl, partially saturated  
 heterocyclyl, heteroaryl, heteroaralkyl, heteroarylthioalkyl,  
 heteroaralkylthioalkyl, alkylsulfonyl, haloalkylsulfonyl, arylsulfonyl,  
 arylsulfonylalkyl, aralkylsulfonyl, cycloalkylsulfonyl, cycloalkylsulfonylalkyl,  
 heteroarylsulfonylalkyl, heteroarylsulfonyl, and aralkylsulfonylalkyl;

Q is formula (II):



- wherein  $D^1$ ,  $D^2$ ,  $J^1$ ,  $J^2$  and  $K^1$  are independently selected from the group consisting of C, N, O, S and a covalent bond with the provisos that no more than one is a covalent bond, no more than one of  $D^1$ ,  $D^2$ ,  $J^1$ ,  $J^2$  and  $K^1$  is O, no more than one of  $D^1$ ,  $D^2$ ,  $J^1$ ,  $J^2$  and  $K^1$  is S, one of  $D^1$ ,  $D^2$ ,  $J^1$ ,  $J^2$  and  $K^1$  must be a covalent bond when two of  $D^1$ ,  $D^2$ ,  $J^1$ ,  $J^2$  and  $K^1$  are O and S, and no more than four of  $D^1$ ,  $D^2$ ,  $J^1$ ,  $J^2$  and  $K^1$  are N, with the proviso that  $R^9$ ,  $R^{10}$ ,  $R^{11}$ ,  $R^{12}$ , and  $R^{13}$  are each independently selected to maintain the tetravalent nature of carbon, trivalent nature of nitrogen, the divalent nature of sulfur, and the divalent nature of oxygen and that  $D^1$ ,  $D^2$ ,  $J^1$ ,  $J^2$  and  $K^1$  are selected to maintain an aromatic ring system;

Q is optionally selected from formula (III):



- wherein  $D^3$ ,  $D^4$ ,  $J^3$ , and  $J^4$  are independently selected from the group consisting of C, N, O, and S, no more than one of  $D^3$ ,  $D^4$ ,  $J^3$ , and  $J^4$  is O, no

more than one of  $D^3$ ,  $D^4$ ,  $J^3$ , and  $J^4$  is S, and no more than three of  $D^1$ ,  $D^2$ ,  $J^1$ , and  $J^2$  are N, with the provisos that  $R^9$ ,  $R^{10}$ ,  $R^{11}$ , and  $R^{12}$  are each independently selected to maintain the tetravalent nature of carbon, trivalent nature of nitrogen, the divalent nature of sulfur, and the divalent nature of oxygen and that  $D^3$ ,  $D^4$ ,  $J^3$ , and  $J^4$  are selected to maintain an aromatic ring system;

Q is optionally selected from the group consisting of hydrido, alkyl, alkoxy, alkylamino, alkylthio, haloalkylthio, alkenyl, alkynyl, saturated heterocyclyl, partially saturated heterocyclyl, acyl, aroyl, heteroaroyl, cycloalkyl, cycloalkylalkyl, cycloalkenyl, cycloalkenylalkyl, cycloalkylalkenyl, haloalkyl, haloalkoxy, haloalkenyl, halocycloalkyl, halocycloalkenyl, haloalkoxyalkyl, haloalkenyloxyalkyl, halocycloalkoxyalkyl, and halocycloalkenyloxyalkyl with the proviso that  $Z^0$  is selected from other than a single covalent bond when Q is hydrido;

K is  $(CR^{4a}R^{4b})_n$  wherein n is an integer selected from 1 through 2;

$R^{4a}$  and  $R^{4b}$  are independently selected from the group consisting of halo, hydrido, hydroxy, cyano, hydroxyalkyl, alkyl, alkenyl, alkoxyalkyl, aralkyl, heteroaralkyl, alkylthioalkyl, haloalkyl, haloalkenyl, and cyanoalkyl;

$E^0$  is  $E^1$ , when K is  $(CR^{4a}R^{4b})_n$ , wherein  $E^1$  is selected from the group consisting of a covalent single bond, O, S, C(O), C(S), C(O)O, C(S)O, C(O)S, C(S)S, C(O)N( $R^7$ ), ( $R^7$ )NC(O), C(S)N( $R^7$ ), ( $R^7$ )NC(S), OC(O)N( $R^7$ ), ( $R^7$ )NC(O)O, SC(S)N( $R^7$ ), ( $R^7$ )NC(S)S, SC(O)N( $R^7$ ), ( $R^7$ )NC(O)S, OC(S)N( $R^7$ ), ( $R^7$ )NC(S)O, N( $R^8$ )C(O)N( $R^7$ ), ( $R^7$ )NC(O)N( $R^8$ ), N( $R^8$ )C(S)N( $R^7$ ), ( $R^7$ )NC(S)N( $R^8$ ), S(O), S(O)<sub>2</sub>, S(O)<sub>2</sub>N( $R^7$ ), N( $R^7$ )S(O)<sub>2</sub>, S(O)<sub>2</sub>N( $R^7$ )C(O), C(O)N( $R^7$ )S(O)<sub>2</sub>, P(O)( $R^8$ ), N( $R^7$ )P(O)( $R^8$ ),

$P(O)(R^8)N(R^7)$ ,  $N(R^7)$ ,  $ON(R^7)$ ,  $CR^{4a}=CR^{4b}$ , ethynylidene ( $C\equiv C$ ; 1,2-ethynyl), and  $C=CR^{4a}R^{4b}$ ;

K is optionally  $(CH(R^{14}))_j-T$  wherein j is selected from a integer from 0 through 2 and T is selected from the group consisting of single covalent bond, O, S, and  $N(R^7)$  with the proviso that  $(CH(R^{14}))_j$  is bonded to the pyridone ring;

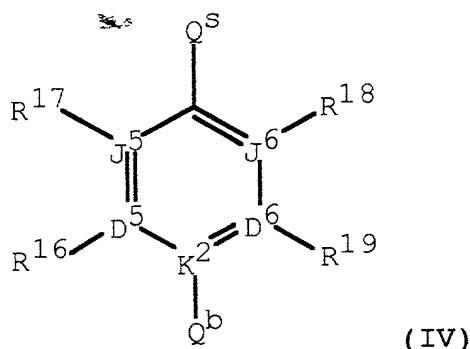
$E^0$  is optionally  $E^2$ , when K is  $(CH(R^{14}))_j-T$ , wherein  $E^2$  is selected from the group consisting of a covalent single bond, C(O), C(S), C(O)O, C(S)O, C(O)S, C(S)S, C(O) $N(R^7)$ ,  $(R^7)NC(O)$ , C(S) $N(R^7)$ ,  $(R^7)NC(S)$ ,  $(R^7)NC(O)O$ ,  $(R^7)NC(S)S$ ,  $(R^7)NC(O)S$ ,  $(R^7)NC(S)O$ ,  $N(R^8)C(O)N(R^7)$ ,  $(R^7)NC(O)N(R^8)$ ,  $N(R^8)C(S)N(R^7)$ ,  $(R^7)NC(S)N(R^8)$ , S(O), S(O)<sub>2</sub>, S(O)<sub>2</sub> $N(R^7)$ ,  $N(R^7)S(O)_2$ , S(O)<sub>2</sub>N(H)C(O), C(O)N(H)S(O)<sub>2</sub>, P(O)(R<sup>8</sup>),  $N(R^7)P(O)(R^8)$ , P(O)(R<sup>8</sup>) $N(R^7)$ , and  $N(R^7)$ ;

K is optionally  $G-(CH(R^{15}))_k$  wherein k is selected from an integer from 1 through 2 and G is selected from the group consisting of O, S, and  $N(R^7)$  with the proviso that  $R^{15}$  is other than hydroxy, cyano, halo, amino, alkylamino, dialkylamino, and sulfhydryl when k is 1;

$E^0$  is optionally  $E^3$  when K is  $G-(CH(R^{15}))_k$ , wherein  $E^3$  is selected from the group consisting of a covalent single bond, O, S, C(O), C(S), C(O)O, C(S)O, C(O)S, C(S)S, C(O) $N(R^7)$ ,  $(R^7)NC(O)$ , C(S) $N(R^7)$ ,  $(R^7)NC(S)$ , OC(O) $N(R^7)$ ,  $(R^7)NC(O)O$ , SC(S) $N(R^7)$ ,  $(R^7)NC(S)S$ , SC(O) $N(R^7)$ ,  $(R^7)NC(O)S$ , OC(S) $N(R^7)$ ,  $(R^7)NC(S)O$ ,  $N(R^8)C(O)N(R^7)$ ,  $(R^7)NC(O)N(R^8)$ ,  $N(R^8)C(S)N(R^7)$ ,  $(R^7)NC(S)N(R^8)$ , S(O), S(O)<sub>2</sub>,

$S(O)_2N(R^7)$ ,  $N(R^7)S(O)_2$ ,  $P(O)(R^8)$ ,  $N(R^7)P(O)(R^8)$ ,  $P(O)(R^8)N(R^7)$ ,  
 $N(R^7)$ ,  $ON(R^7)$ ,  $CR^{4a}=CR^{4b}$ , ethynylidene ( $C\equiv C$ ; 1,2-ethynyl), and  
 $C=CR^{4a}R^{4b}$ ;

$Y^0$  is formula (IV):



5

wherein  $D^5$ ,  $D^6$ ,  $J^5$ , and  $J^6$  are independently selected from the group  
 consisting of C, N, O, S and a covalent bond with the provisos that no more  
 than one is a covalent bond,  $K^2$  is independently selected from the group  
 consisting of C and  $N^+$ , no more than one of  $D^5$ ,  $D^6$ ,  $J^5$ , and  $J^6$  is O, no more  
 10 than one of  $D^5$ ,  $D^6$ ,  $J^5$ , and  $J^6$  is S, one of  $D^5$ ,  $D^6$ ,  $J^5$ , and  $J^6$  must be a  
 covalent bond when two of  $D^5$ ,  $D^6$ ,  $J^5$ , and  $J^6$  are O and S, no more than three  
 of  $D^5$ ,  $D^6$ ,  $J^5$ , and  $J^6$  is N when  $K^2$  is  $N^+$ , and no more than four of  $D^5$ ,  $D^6$ ,  
 $J^5$ , and  $J^6$  are N, with the provisos that  $R^{16}$ ,  $R^{17}$ ,  $R^{18}$ , and  $R^{19}$  are each  
 independently selected to maintain the tetravalent nature of carbon, trivalent  
 15 nature of nitrogen, the divalent nature of sulfur, and the divalent nature of  
 oxygen and that  $D^5$ ,  $D^6$ ,  $J^5$ , and  $J^6$  are selected to maintain an aromatic ring  
 system;

$R^{16}$  and  $R^{17}$  are optionally independently taken together to form a  
 linear moiety spacer having from 3 through 6 atoms connected to form a ring  
 20 selected from the group consisting of a cycloalkenyl ring having from 5

through 8 members, a partially saturated heterocyclyl ring having from 5 through 8 members, a heteroaryl having from 5 through 6 members, and an aryl;

$R^{16}$  or  $R^{19}$  is optionally selected from the group consisting of

- 5  $NR^{20}R^{21}$ ,  $N(R^{26})C(NR^{25})(R^{23})(R^{24})$ , and  $C(NR^{25})NR^{23}R^{24}$ , with the proviso that  $R^{16}$ ,  $R^{19}$ , and  $Q^b$  are not simultaneously hydrido;

$Q^b$  is selected from the group consisting of  $NR^{20}R^{21}$ ,  $+NR^{20}R^{21}R^{22}$ ,

oxy, alkyl, , alkylamino, dialkylamino, dialkylsulfoniumalkyl, acylamino and hydrido, wherein  $R^{20}$ ,  $R^{21}$ , and  $R^{22}$  are independently selected from the

- 10 group consisting of hydrido, amino, alkyl, hydroxy, alkoxy, , alkylamino, dialkylamino, and hydroxyalkyl with the provisos that no more than one of  $R^{20}$ ,  $R^{21}$ , and  $R^{22}$  is hydroxy, alkoxy, alkylamino, amino, and dialkylamino at the same time and that  $R^{20}$ ,  $R^{21}$ , and  $R^{22}$  must be other than be hydroxy, alkoxy, alkylamino, amino, and dialkylamino when  $K^2$  is  $N^+$ ;

- 15  $R^{20}$  and  $R^{21}$ ,  $R^{20}$  and  $R^{22}$ , and  $R^{21}$  and  $R^{22}$  are independently optionally selected to form a spacer pair wherein a spacer pair is taken together to form a linear moiety having from 4 through 7 atoms connecting the points of bonding of said spacer pair members to form a heterocyclyl ring having 5 through 8 members with the proviso that no more than one of the group
- 20 consisting of spacer pairs  $R^{20}$  and  $R^{21}$ ,  $R^{20}$  and  $R^{22}$ , and  $R^{21}$  and  $R^{22}$  is used at the same time;

$Q^b$  is optionally selected from the group consisting of

$N(R^{26})SO_2N(R^{23})(R^{24})$ ,  $N(R^{26})C(O)OR^5$ ,  $N(R^{26})C(O)SR^5$ ,

$N(R^{26})C(S)OR^5$  and  $N(R^{26})C(S)SR^5$  with the proviso that no more than one

- 25 of  $R^{23}$ ,  $R^{24}$ , and  $R^{26}$  is hydroxy, alkoxy, alkylamino, amino, and dialkylamino

when two of the group consisting of  $R^{23}$ ,  $R^{24}$ , and  $R^{26}$  are bonded to the same atom;

- $Q^b$  is optionally selected from the group consisting of
- dialkylsulfonium, trialkylphosphonium,  $C(NR^{25})NR^{23}R^{24}$ ,
- 5  $N(R^{26})C(NR^{25})N(R^{23})(R^{24})$ ,  $N(R^{26})C(O)N(R^{23})(R^{24})$ ,
- $N(R^{26})C(S)N(R^{23})(R^{24})$ ,  $C(NR^{25})OR^5$ ,
- $C(O)N(R^{26})C(NR^{25})N(R^{23})(R^{24})$ ,  $C(S)N(R^{26})C(NR^{25})N(R^{23})(R^{24})$ ,
- $N(R^{26})N(R^{26})C(NR^{25})N(R^{23})(R^{24})$ ,  $ON(R^{26})C(NR^{25})N(R^{23})(R^{24})$ ,
- $N(R^{26})N(R^{26})SO_2N(R^{23})(R^{24})$ ,  $C(NR^{25})SR^5$ ,  $C(O)NR^{23}R^{24}$ , and
- 10  $C(O)NR^{23}R^{24}$  with the provisos that no more than one of  $R^{23}$ ,  $R^{24}$ , and  $R^{26}$  can be hydroxy, alkoxy, alkylamino, amino, or dialkylamino when two of the group consisting of  $R^{23}$ ,  $R^{24}$ , and  $R^{26}$  are bonded to the same atom and that said  $Q^b$  group is bonded directly to a carbon atom;
- $R^{23}$ ,  $R^{24}$ ,  $R^{25}$ , and  $R^{26}$  are independently selected from the group
- 15 consisting of hydrido, alkyl, hydroxy, alkoxy, aminoalkyl, alkylamino, dialkylamino, amino, and hydroxyalkyl;
- $R^{23}$  and  $R^{24}$  are optionally taken together to form a linear spacer moiety having from 4 through 7 atoms connecting the points of bonding to form a heterocyclyl ring having 5 through 8 members;
- 20  $Q^s$  is selected from the group consisting of a single covalent bond,  $(CR^{37}R^{38})_b(W^0)_{az}$  wherein  $az$  is an integer selected from 0 through 1,  $b$  is an integer selected from 1 through 4, and  $W^0$  is selected from the group consisting of O, S, C(O), C(S), C(O)O, C(S)O, C(O)S, C(S)S, C(O)N(R<sup>14</sup>), (R<sup>14</sup>)NC(O), C(S)N(R<sup>14</sup>), (R<sup>14</sup>)NC(S), OC(O)N(R<sup>14</sup>), SC(S)N(R<sup>14</sup>),

$\text{SC(O)N(R}^{14}\text{)}, \text{OC(S)N(R}^{14}\text{)}, \text{N(R}^{15}\text{)C(O)N(R}^{14}\text{)}, (\text{R}^{14}\text{)NC(O)N(R}^{15}\text{)},$   
 $\text{N(R}^{15}\text{)C(S)N(R}^{14}\text{)}, (\text{R}^{14}\text{)NC(S)N(R}^{15}\text{)}, \text{S(O)}, \text{S(O)}_2, \text{S(O)}_2\text{N(R}^{14}\text{)},$   
 $\text{N(R}^{14}\text{)S(O)}_2, \text{P(O)(R}^8\text{)}, \text{N(R}^7\text{)P(O)(R}^8\text{)}, \text{P(O)(R}^8\text{)N(R}^7\text{)}, \text{N(R}^{14}\text{)},$   
 $\text{ON(R}^{14}\text{)}, (\text{CH(R}^{14}\text{)})_c\text{-W}^1\text{-(CH(R}^{15}\text{))}_d$  wherein c and d are integers

5 independently selected from 1 through 4, and  $\text{W}^1$  is selected from the group consisting of O, S, C(O), C(S), C(O)O, C(S)O, C(O)S, C(S)S, C(O)N(R<sup>14</sup>), (R<sup>14</sup>)NC(O), C(S)N(R<sup>14</sup>), (R<sup>14</sup>)NC(S), OC(O)N(R<sup>14</sup>), (R<sup>14</sup>)NC(O)O, SC(S)N(R<sup>14</sup>), (R<sup>14</sup>)NC(S)S, SC(O)N(R<sup>14</sup>), (R<sup>14</sup>)NC(O)S, OC(S)N(R<sup>14</sup>), (R<sup>14</sup>)NC(S)O, N(R<sup>15</sup>)C(O)N(R<sup>14</sup>), (R<sup>14</sup>)NC(O)N(R<sup>15</sup>),

10  $\text{N(R}^{15}\text{)C(S)N(R}^{14}\text{)}, (\text{R}^{14}\text{)NC(S)N(R}^{15}\text{)}, \text{S(O)}, \text{S(O)}_2, \text{S(O)}_2\text{N(R}^{14}\text{)},$   
 $\text{N(R}^{14}\text{)S(O)}_2, \text{P(O)(R}^8\text{)}, \text{N(R}^7\text{)P(O)(R}^8\text{)}, \text{P(O)(R}^8\text{)N(R}^7\text{)}, \text{N(R}^{14}\text{)},$   
 $\text{ON(R}^{14}\text{)},$  and  $(\text{CH(R}^{14}\text{)})_e\text{-W}^{22}\text{-(CH(R}^{15}\text{))}_h$  wherein e and h are integers

independently selected from 0 through 2 and  $\text{W}^{22}$  is selected from the group consisting of  $\text{CR}^{41}=\text{CR}^{42}$ ,  $\text{CR}^{41}\text{R}^{42}=\text{C}$ ; vinylidene), ethynylidene ( $\text{C}\equiv\text{C}$ ; 1,2-

15 ethynyl), 1,2-cyclopropyl, 1,2-cyclobutyl, 1,2-cyclohexyl, 1,3-cyclohexyl, 1,2-cyclopentyl, 1,3-cyclopentyl, 2,3-morpholinyl, 2,4-morpholinyl, 2,6-morpholinyl, 3,4-morpholinyl, 3,5-morpholinyl, 1,2-piperazinyl, 1,3-piperazinyl, 2,3-piperazinyl, 2,6-piperazinyl, 1,2-piperidinyl, 1,3-piperidinyl, 2,3-piperidinyl, 2,4-piperidinyl, 2,6-piperidinyl, 3,4-piperidinyl, 1,2-pyrrolidinyl, 1,3-

20 pyrrolidinyl, 2,3-pyrrolidinyl, 2,4-pyrrolidinyl, 2,5-pyrrolidinyl, 3,4-pyrrolidinyl, 2,3-tetrahydrofuranyl, 2,4-tetrahydrofuranyl, 2,5-tetrahydrofuranyl, and 3,4-tetrahydrofuranyl, with the provisos that  $\text{R}^{14}$  and  $\text{R}^{15}$  are selected from other

than halo and cyano when directly bonded to N and that  $(\text{CR}^{37}\text{R}^{38})_b$ ,

$(\text{CH(R}^{14}\text{)})_c$ ,  $(\text{CH(R}^{14}\text{)})_e$  and are bonded to  $\text{E}^0$ ;



$Y^0$  is optionally  $Y^{AT}$  wherein  $Y^{AT}$  is  $Q^b-Q^s$ ;

$Y^0$  is optionally  $Q^b-Q^{ss}$  wherein  $Q^{ss}$  is selected from the group

consisting of  $(CR^{37}R^{38})_f$  wherein  $f$  is an integer selected from 1 through 6,

$(CH(R^{14}))_c-W^1-(CH(R^{15}))_d$  wherein  $c$  and  $d$  are integers independently

- 5 selected from 1 through 4, and  $W^1$  is selected from the group consisting of  $W^1$  is selected from the group consisting of O, S, C(O), C(S), C(O)O, C(S)O, C(O)S, C(S)S, C(O)N(R<sup>14</sup>), (R<sup>14</sup>)NC(O), C(S)N(R<sup>14</sup>), (R<sup>14</sup>)NC(S), OC(O)N(R<sup>14</sup>), (R<sup>14</sup>)NC(O)O, SC(S)N(R<sup>14</sup>), (R<sup>14</sup>)NC(S)S, SC(O)N(R<sup>14</sup>), (R<sup>14</sup>)NC(O)S, OC(S)N(R<sup>14</sup>), (R<sup>14</sup>)NC(S)O, N(R<sup>15</sup>)C(O)N(R<sup>14</sup>),  
10 (R<sup>14</sup>)NC(O)N(R<sup>15</sup>), N(R<sup>15</sup>)C(S)N(R<sup>14</sup>), (R<sup>14</sup>)NC(S)N(R<sup>15</sup>), S(O), S(O)<sub>2</sub>, S(O)<sub>2</sub>N(R<sup>14</sup>), N(R<sup>14</sup>)S(O)<sub>2</sub>, P(O)(R<sup>8</sup>), N(R<sup>7</sup>)P(O)(R<sup>8</sup>), P(O)(R<sup>8</sup>)N(R<sup>7</sup>), N(R<sup>14</sup>), ON(R<sup>14</sup>), and  $(CH(R^{14}))_e-W^2-(CH(R^{15}))_h$  wherein  $e$  and  $h$  are integers independently selected from 0 through 2 and  $W^2$  is selected from the group consisting of  $CR^{4a}=CR^{4b}$ , ethynylidene ( $C\equiv C$ ; 1,2-ethynyl), and  
15  $C=CR^{4a}R^{4b}$  with the provisos that  $R^{14}$  and  $R^{15}$  are selected from other than halo and cyano when directly bonded to N and that  $(CR^{37}R^{38})_f$ ,  $(CH(R^{14}))_c$ , and  $(CH(R^{14}))_e$  are bonded to  $E^0$ ;

$Y^0$  is optionally  $Q^b-Q^{sss}$  wherein  $Q^{sss}$  is  $(CH(R^{38}))_r-W^3$ ,  $r$  is an

- integer selected from 1 through 3,  $W^3$  is selected from the group consisting of  
20 1,1-cyclopropyl, 1,2-cyclopropyl, 1,1-cyclobutyl, 1,2-cyclobutyl, 1,2-cyclohexyl, 1,3-cyclohexyl, 1,4-cyclohexyl, 1,2-cyclopentyl, 1,3-cyclopentyl, 2,3-morpholinyl, 2,4-morpholinyl, 2,5-morpholinyl, 2,6-morpholinyl, 3,4-morpholinyl, 3,5-morpholinyl, 1,2-piperazinyl, 1,3-piperazinyl, 1,4-piperazinyl, 2,3-piperazinyl, 2,5-piperazinyl, 2,6-piperazinyl, 1,2-piperidinyl, 1,3-piperidinyl,

- 1,4-piperidinyl, 2,3-piperidinyl, 2,4-piperidinyl, 2,5-piperidinyl, 2,6-piperidinyl, 3,4-piperidinyl, 3,5-piperidinyl, 3,6-piperidinyl, 1,2-pyrrolidinyl, 1,3-pyrrolidinyl, 2,3-pyrrolidinyl, 2,4-pyrrolidinyl, 2,5-pyrrolidinyl, 3,4-pyrrolidinyl, 2H-2,3-pyranyl, 2H-2,4-pyranyl, 2H-2,5-pyranyl, 4H-2,3-pyranyl, 4H-2,4-pyranyl, 4H-2,5-pyranyl, 2H-pyran-2-one-3,4-yl, 2H-pyran-2-one-4,5-yl, 4H-pyran-4-one-2,3-yl, 2,3-tetrahydrofuranyl, 2,4-tetrahydrofuranyl, 2,5-tetrahydrofuranyl, 3,4-tetrahydrofuranyl, 2,3-tetrahydropyranyl, 2,4-tetrahydropyranyl, 2,5-tetrahydropyranyl, 2,6-tetrahydropyranyl, 3,4-tetrahydropyranyl, and 3,5-tetrahydropyranyl, and each carbon and hydrido
- 5 containing nitrogen member of the ring of the  $W^3$  other than the points of attachment is optionally substituted with one or more of the group consisting of  $R^9$ ,  $R^{10}$ ,  $R^{11}$ , and  $R^{12}$ , with the proviso that  $(CH(R^{38}))_r$  is bonded to  $E^0$  and  $Q^b$  is bonded to lowest numbered substituent position of each  $W^3$ ;

- $Y^0$  is optionally  $Q^b-Q^{ssr}$  wherein  $Q^{ssr}$  is  $(CH(R^{38}))_r-W^4$ ,  $r$  is an
- 15 integer selected from 1 through 3,  $W^4$  is selected from the group consisting of 1,2-cyclobutyl, 1,2-cyclohexyl, 1,3-cyclohexyl, 1,4-cyclohexyl, 1,2-cyclopentyl, 1,3-cyclopentyl, 2,3-morpholinyl, 2,4-morpholinyl, 2,5-morpholinyl, 2,6-morpholinyl, 3,4-morpholinyl, 3,5-morpholinyl, 1,2-piperazinyl, 1,3-piperazinyl, 1,4-piperazinyl, 2,3-piperazinyl, 2,5-piperazinyl, 2,6-piperazinyl, 1,2-piperidinyl,
- 20 1,3-piperidinyl, 1,4-piperidinyl, 2,3-piperidinyl, 2,4-piperidinyl, 2,5-piperidinyl, 2,6-piperidinyl, 3,4-piperidinyl, 3,5-piperidinyl, 3,6-piperidinyl, 1,2-pyrrolidinyl, 1,3-pyrrolidinyl, 2,3-pyrrolidinyl, 2,4-pyrrolidinyl, 2,5-pyrrolidinyl, 3,4-pyrrolidinyl, 2H-2,3-pyranyl, 2H-2,4-pyranyl, 2H-2,5-pyranyl, 4H-2,3-pyranyl, 4H-2,4-pyranyl, 4H-2,5-pyranyl, 2H-pyran-2-one-3,4-yl, 2H-pyran-2-one-4,5-
- 25 yl, 4H-pyran-4-one-2,3-yl, 2,3-tetrahydrofuranyl, 2,4-tetrahydrofuranyl, 2,5-tetrahydrofuranyl, 3,4-tetrahydrofuranyl, 2,3-tetrahydropyranyl, 2,4-tetrahydropyranyl, 2,5-tetrahydropyranyl, 2,6-tetrahydropyranyl, 3,4-tetrahydropyranyl, and 3,5-tetrahydropyranyl, and each carbon and hydrido containing nitrogen member of the ring of the  $W^4$  other than the points of
- 30 attachment is optionally substituted with one or more of the group consisting of

$R^9$ ,  $R^{10}$ ,  $R^{11}$ , and  $R^{12}$ , with the provisos that  $(CH(R^{38}))_r$  is bonded to  $E^0$  and  $Q^b$  is bonded to highest number substituent position of each  $W^4$ ;

$Y^0$  is optionally  $Q^b-Q^{ssss}$  wherein  $Q^{ssss}$  is  $(CH(R^{38}))_r-W^5$ ,  $r$  is an

integer selected from 1 through 3,  $W^5$  is selected from the group consisting of

- 5 1,4-indenyl, 1,5-indenyl, 1,6-indenyl, 1,7-indenyl, 2,7-indenyl, 2,6-indenyl, 2,5-indenyl, 2,4-indenyl, 3,4-indenyl, 3,5-indenyl, 3,6-indenyl, 3,7-indenyl, 2,4-benzofuranyl, 2,5-benzofuranyl, 2,6-benzofuranyl, 2,7-benzofuranyl, 3,4-benzofuranyl, 3,5-benzofuranyl, 3,6-benzofuranyl, 3,7-benzofuranyl, 2,4-benzothiophenyl, 2,5-benzothiophenyl, 2,6-benzothiophenyl, 2,7-
- 10 benzothiophenyl, 3,4-benzothiophenyl, 3,5-benzothiophenyl, 3,6-benzothiophenyl, 3,7-benzothiophenyl, 2,7-imidazo(1,2-a)pyridinyl, 3,4-imidazo(1,2-a)pyridinyl, 3,5-imidazo(1,2-a)pyridinyl, 3,6-imidazo(1,2-a)pyridinyl, 3,7-imidazo(1,2-a)pyridinyl, 2,4-indolyl, 2,5-indolyl, 2,6-indolyl, 2,7-indolyl, 3,4-indolyl, 3,5-indolyl, 3,6-indolyl, 3,7-indolyl, 1,4-isoindolyl, 1,5-
- 15 isoindolyl, 1,6-isoindolyl, 2,4-isoindolyl, 2,5-isoindolyl, 2,6-isoindolyl, 2,7-isoindolyl, 1,3-isoindolyl, 3,4-indazolyl, 3,5-indazolyl, 3,6-indazolyl, 3,7-indazolyl, 2,4-benzoxazolyl, 2,5-benzoxazolyl, 2,6-benzoxazolyl, 2,7-benzoxazolyl, 3,4-benzisoxazolyl, 3,5-benzisoxazolyl, 3,6-benzisoxazolyl, 3,7-
- 20 naphthyl, 2,4-naphthyl, 2,5-naphthyl, 2,6-naphthyl, 2,7-naphthyl, 2,8-naphthyl, 2,4-quinolinyl, 2,5-quinolinyl, 2,6-quinolinyl, 2,7-quinolinyl, 2,8-quinolinyl, 3,4-quinolinyl, 3,5-quinolinyl, 3,6-quinolinyl, 3,7-quinolinyl, 3,8-quinolinyl, 4,5-quinolinyl, 4,6-quinolinyl, 4,7-quinolinyl, 4,8-quinolinyl, 1,4-isoquinolinyl, 1,5-isoquinolinyl, 1,6-isoquinolinyl, 1,7-isoquinolinyl, 1,8-isoquinolinyl, 3,4-
- 25 isoquinolinyl, 3,5-isoquinolinyl, 3,6-isoquinolinyl, 3,7-isoquinolinyl, 3,8-isoquinolinyl, 4,5-isoquinolinyl, 4,6-isoquinolinyl, 4,7-isoquinolinyl, 4,8-isoquinolinyl, 3,4-cinnolinyl, 3,5-cinnolinyl, 3,6-cinnolinyl, 3,7-cinnolinyl, 3,8-cinnolinyl, 4,5-cinnolinyl, 4,6-cinnolinyl, 4,7-cinnolinyl, and 4,8-cinnolinyl, and each carbon and hydrido containing nitrogen member of the ring of the  $W^5$
- 30 other than the points of attachment is optionally substituted with one or more of the group consisting of  $R^9$ ,  $R^{10}$ ,  $R^{11}$ , and  $R^{12}$ , with the proviso that  $Q^b$  is

bonded to lowest number substituent position of each  $W^5$  and that  $(CH(R^{38}))_r$  is bonded to  $E^0$ ;

$Y^0$  is optionally  $Q^b-Q^{sssr}$  wherein  $Q^{sssr}$  is  $(CH(R^{38}))_r-W^6$ ,  $r$  is an

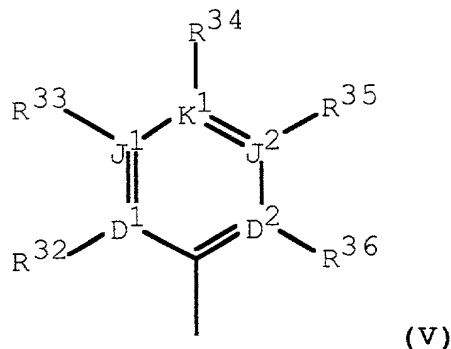
integer selected from 1 through 3,  $W^6$  is selected from the group consisting of

- 5 1,4-indenyl, 1,5-indenyl, 1,6-indenyl, 1,7-indenyl, 2,7-indenyl, 2,6-indenyl, 2,5-indenyl, 2,4-indenyl, 3,4-indenyl, 3,5-indenyl, 3,6-indenyl, 3,7-indenyl, 2,4-benzofuranyl, 2,5-benzofuranyl, 2,6-benzofuranyl, 2,7-benzofuranyl, 3,4-benzofuranyl, 3,5-benzofuranyl, 3,6-benzofuranyl, 3,7-benzofuranyl, 2,4-benzothiophenyl, 2,5-benzothiophenyl, 2,6-benzothiophenyl, 2,7-
- 10 benzothiophenyl, 3,4-benzothiophenyl, 3,5-benzothiophenyl, 3,6-benzothiophenyl, 3,7-benzothiophenyl, 2,7-imidazo(1,2-a)pyridinyl, 3,4-imidazo(1,2-a)pyridinyl, 3,5-imidazo(1,2-a)pyridinyl, 3,6-imidazo(1,2-a)pyridinyl, 3,7-imidazo(1,2-a)pyridinyl, 2,4-indolyl, 2,5-indolyl, 2,6-indolyl, 2,7-indolyl, 3,4-indolyl, 3,5-indolyl, 3,6-indolyl, 3,7-indolyl, 1,4-isoindolyl, 1,5-
- 15 isoindolyl, 1,6-isoindolyl, 2,4-isoindolyl, 2,5-isoindolyl, 2,6-isoindolyl, 2,7-isoindolyl, 1,3-isoindolyl, 3,4-indazolyl, 3,5-indazolyl, 3,6-indazolyl, 3,7-indazolyl, 2,4-benzoxazolyl, 2,5-benzoxazolyl, 2,6-benzoxazolyl, 2,7-benzoxazolyl, 3,4-benzisoxazolyl, 3,5-benzisoxazolyl, 3,6-benzisoxazolyl, 3,7-benzisoxazolyl, 1,4-naphthyl, 1,5-naphthyl, 1,6-naphthyl, 1,7-naphthyl, 1,8-
- 20 naphthyl, 2,4-naphthyl, 2,5-naphthyl, 2,6-naphthyl, 2,7-naphthyl, 2,8-naphthyl, 2,4-quinolinyl, 2,5-quinolinyl, 2,6-quinolinyl, 2,7-quinolinyl, 2,8-quinolinyl, 3,4-quinolinyl, 3,5-quinolinyl, 3,6-quinolinyl, 3,7-quinolinyl, 3,8-quinolinyl, 4,5-quinolinyl, 4,6-quinolinyl, 4,7-quinolinyl, 4,8-quinolinyl, 1,4-isoquinolinyl, 1,5-isoquinolinyl, 1,6-isoquinolinyl, 1,7-isoquinolinyl, 1,8-isoquinolinyl, 3,4-
- 25 isoquinolinyl, 3,5-isoquinolinyl, 3,6-isoquinolinyl, 3,7-isoquinolinyl, 3,8-isoquinolinyl, 4,5-isoquinolinyl, 4,6-isoquinolinyl, 4,7-isoquinolinyl, 4,8-isoquinolinyl, 3,4-cinnolinyl, 3,5-cinnolinyl, 3,6-cinnolinyl, 3,7-cinnolinyl, 3,8-cinnolinyl, 4,5-cinnolinyl, 4,6-cinnolinyl, 4,7-cinnolinyl, and 4,8-cinnolinyl, and each carbon and hydrido containing nitrogen member of the ring of the  $W^6$
- 30 other than the points of attachment is optionally substituted with one or more of the group consisting of  $R^9$ ,  $R^{10}$ ,  $R^{11}$ , and  $R^{12}$ , with the proviso that  $Q^b$  is

bonded to highest number substituent position of each  $W^6$  and that  
 $(CH(R^{38}))_r$  is bonded to  $E^0$ .

In another embodiment of compounds of Formula I or a  
 pharmaceutically acceptable salt thereof,

- 5 J is selected from the group consisting of O and S;  
 B is formula (V):



- wherein  $D^1, D^2, J^1, J^2$  and  $K^1$  are independently selected from the group  
 consisting of C, N, O, S and a covalent bond with the provisos that no more  
 10 than one is a covalent bond, no more than one of  $D^1, D^2, J^1, J^2$  and  $K^1$  is O,  
 no more than one of  $D^1, D^2, J^1, J^2$  and  $K^1$  is S, one of  $D^1, D^2, J^1, J^2$  and  $K^1$   
 must be a covalent bond when two of  $D^1, D^2, J^1, J^2$  and  $K^1$  are O and S, and  
 no more than four of  $D^1, D^2, J^1, J^2$  and  $K^1$  are N, with the provisos that  $D^1,$   
 $D^2, J^1, J^2$  and  $K^1$  are selected to maintain an aromatic ring system and that  
 15  $R^{32}, R^{33}, R^{34}, R^{35}$ , and  $R^{36}$  are each independently selected to maintain the  
 tetravalent nature of carbon, trivalent nature of nitrogen, the divalent nature of  
 sulfur, and the divalent nature of oxygen;

$R^9, R^{10}, R^{11}, R^{12}, R^{13}, R^{16}, R^{17}, R^{18}, R^{19}, R^{32}, R^{33}, R^{34}, R^{35}$ , and

$R^{36}$  are independently selected from the group consisting of

- 20 heterocyclalkoxy, N-alkyl-N-arylamino, heterocyclalamino,  
 heterocyclalkylamino, hydrido, acetamido, haloacetamido, amidino, guanidino,

- dialkylsulfonium, trialkylphosphonium, dialkylsulfoniumalkyl, carboxy, heteroaralkylthio, heteroaralkoxy, cycloalkylamino, acylalkyl, acylalkoxy, aryloylalkoxy, heterocyclyloxy, aralkylaryl, aralkyl, aralkenyl, aralkynyl, heterocyclyl, perhaloaralkyl, aralkylsulfonyl, aralkylsulfonylalkyl,
- 5 aralkylsulfinyl, aralkylsulfinylalkyl, halocycloalkyl, halocycloalkenyl, cycloalkylsulfinyl, cycloalkylsulfinylalkyl, cycloalkylsulfonyl, cycloalkylsulfonylalkyl, heteroaryl amino, N-heteroaryl amino-N-alkyl amino, heteroaryl aminoalkyl, haloalkylthio, alkanoyloxy, alkoxy, alkoxyalkyl, haloalkoxyalkyl, heteroaralkoxy, cycloalkoxy, cycloalkenyloxy,
- 10 cycloalkoxyalkyl, cycloalkylalkoxy, cycloalkenyloxyalkyl, cycloalkylenedioxy, halocycloalkoxy, halocycloalkoxyalkyl, halocycloalkenyloxy, halocycloalkenyloxyalkyl, hydroxy, amino, alkoxyamino, thio, nitro, alkyl amino, alkylthio, alkylthioalkyl, aryl amino, aralkyl amino, arylthio, arylthioalkyl, heteroaralkoxyalkyl, alkylsulfinyl, alkylsulfinylalkyl,
- 15 arylsulfinylalkyl, arylsulfonylalkyl, heteroarylsulfinylalkyl, heteroarylsulfonylalkyl, alkylsulfonyl, alkylsulfonylalkyl, haloalkylsulfinylalkyl, haloalkylsulfonylalkyl, alkylsulfonamido, alkylaminosulfonyl, amidosulfonyl, monoalkyl amidosulfonyl, dialkyl amidosulfonyl, monoaryl amidosulfonyl, arylsulfonyl, arylsulfonyl, heteroarylthio,
- 20 heteroarylsulfinyl, heteroarylsulfonyl, heterocyclylsulfonyl, heterocyclylthio, alkanoyl, alkenoyl, aroyl, heteroaroyl, aralkanoyl, heteroaralkanoyl, haloalkanoyl, alkyl, alkenyl, alkynyl, alkenyloxy, alkenyloxyalkyl, alkylenedioxy, haloalkylenedioxy, cycloalkyl, cycloalkylalkanoyl,
- 25 cycloalkenyl, cycloalkylalkyl, cycloalkenylalkyl, halo, haloalkyl, haloalkenyl, haloalkoxy, hydroxyhaloalkyl, hydroxyaralkyl, hydroxyalkyl, alkylenyl amino, hydroxyheteroaralkyl, haloalkoxyalkyl, aryl, aralkyl, aryloxy, aralkoxy, aryloxyalkyl, saturated heterocyclyl, partially saturated heterocyclyl, heteroaryl, heteroaryloxy, heteroaryloxyalkyl, arylalkyl, heteroarylalkyl, arylalkenyl,
- 30 heteroarylalkenyl, carboxyalkyl, carboalkoxy, alkoxy carboxamido, alkylamidocarbonylamido, arylamidocarbonylamido, carboalkoxyalkyl, carboalkoxyalkenyl, carboxy, carboaralkoxy, carboxamido, carboxamidoalkyl, cyano, carbohaloalkoxy, phosphono, phosphonoalkyl, diaralkoxyphosphono, and diaralkoxyphosphonoalkyl;

$R^{16}$ ,  $R^{19}$ ,  $R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$  are independently optionally

$Q^b$ ;

- 5 B is optionally selected from the group consisting of hydrido, trialkylsilyl, C2-C8 alkyl, C3-C8 alkylenyl, C3-C8 alkenyl, C3-C8 alkynyl, C2-C8 haloalkyl, and C3-C8 haloalkenyl wherein each member of group B is optionally substituted at any carbon up to and including 6 atoms from the point of attachment of B to A with one or more of the group consisting of  $R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$ ;

- 10 B is optionally selected from the group consisting of C3-C12 cycloalkyl, C5-C10 cycloalkenyl, and C4-C9 saturated heterocyclyl, wherein each ring carbon is optionally substituted with  $R^{33}$ , a ring carbon other than the ring carbon at the point of attachment of B to A is optionally substituted with oxo provided that no more than one ring carbon is substituted by oxo at the same time, ring carbons and nitrogen adjacent to the carbon atom at the point of attachment are optionally substituted with  $R^9$  or  $R^{13}$ , a ring carbon or nitrogen adjacent to the  $R^9$  position and two atoms from the point of attachment is optionally substituted with  $R^{10}$ , a ring carbon or nitrogen adjacent to the  $R^{13}$  position and two atoms from the point of attachment is optionally substituted with  $R^{12}$ , a ring carbon or nitrogen three atoms from the point of attachment and adjacent to the  $R^{10}$  position is optionally substituted with  $R^{11}$ , a ring carbon or nitrogen three atoms from the point of attachment and adjacent to the  $R^{12}$  position is optionally substituted with  $R^{33}$ , and a ring carbon or nitrogen four atoms from the point of attachment and adjacent to the  $R^{11}$  and  $R^{33}$  positions is optionally substituted with  $R^{34}$ ;

- 25 A is selected from the group consisting of single covalent bond,  $(W^7)_{rr}-(CH(R^{15}))_{pa}$  and  $(CH(R^{15}))_{pa}-(W^7)_{rr}$  wherein rr is an integer

selected from 0 through 1,  $p_a$  is an integer selected from 0 through 6, and  $W^7$  is selected from the group consisting of O, S, C(O), C(O)N(R<sup>7</sup>), C(S)N(R<sup>7</sup>), (R<sup>7</sup>)NC(O), (R<sup>7</sup>)NC(S), and N(R<sup>7</sup>) with the proviso that no more than one of the group consisting of  $r_r$  and  $p_a$  can be 0 at the same time;

5  $R^7$  and  $R^8$  are independently selected from the group consisting of hydrido, hydroxy, alkyl, and alkoxyalkyl;

$R^{14}$ ,  $R^{15}$ ,  $R^{37}$ , and  $R^{38}$  are independently selected from the group consisting of hydrido, hydroxy, halo, alkyl, alkoxyalkyl, haloalkyl, haloalkoxy, and haloalkoxyalkyl;

10  $R^{14}$  and  $R^{38}$  can be independently selected from the group consisting of aroyl and heteroaroyl, wherein  $R^{38}$  is optionally substituted at from one through three of the ring carbons with a substituent selected from the group consisting of  $R^{16}$ ,  $R^{17}$ ,  $R^{18}$ , and  $R^{19}$ ;

$\Psi$  is selected from the group consisting of NR<sup>5</sup>, C(O), and S(O)<sub>2</sub>;

15  $R^5$  is selected from the group consisting of hydrido, hydroxy, alkyl, and alkoxy;

$R^{39}$  and  $R^{40}$  are independently selected from the group consisting of hydrido, hydroxy, halo, hydroxyalkyl, alkyl, alkoxyalkyl, haloalkyl, haloalkoxy, and haloalkoxyalkyl;

20  $R^1$  and  $X^0$  are independently selected from the group consisting of hydrido, alkyl, alkenyl, cyano, halo, haloalkyl, haloalkoxy, haloalkylthio, amino, aminoalkyl, alkylamino, amidino, guanidino, hydroxy, hydroxyamino, alkoxy, hydroxyalkyl, alkoxyamino, thiol, alkylthio, and phosphono;

$X^0$  and  $R^1$  or  $R^1$  and  $R^2$  is optionally -W=X-Y=Z- wherein -W=X-Y=Z- forms an aryl or C5-C6 heteroaryl;

25



W, X, Y, and Z are independently selected from the group consisting of  $C(R^9)$ ,  $C(R^{10})$ ,  $C(R^{11})$ ,  $C(R^{12})$ , N,  $N(R^{10})$ , O, S, and a covalent bond with the provisos that one of W, X, Y, and Z is independently selected to be a covalent bond when one of W, X, Y, and Z is O or S, no more than one of W, X, Y, and Z is optionally O or S, and no more than three of W, X, Y, and Z are optionally N or  $N(R^{10})$ ;

$X^0$  and  $R^1$  or  $R^1$  and  $R^2$  is optionally bonded together to form C5-C8 cycloalkenyl ring or a partially saturated C5-C8 heterocyclyl ring, wherein said ring is optionally substituted with one or more of the group consisting of  $R^9$ ,  $R^{10}$ ,  $R^{11}$ ,  $R^{12}$ , and  $R^{13}$ ;

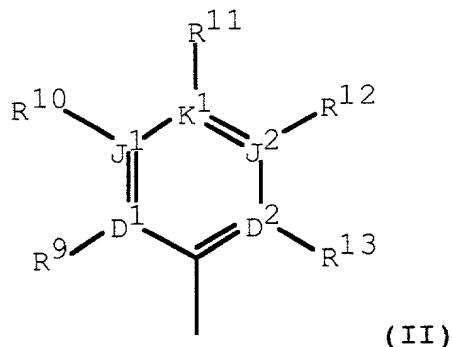
$R^2$  is  $Z^0$ -Q;

$Z^0$  is selected from the group consisting of covalent single bond,  $(CR^{41}R^{42})_q$  wherein q is an integer selected from 1 through 3,  $(CH(R^{41}))_g^-$   $W^0$ -( $CH(R^{42})$ )<sub>p</sub> wherein g and p are integers independently selected from 0 through 3 and  $W^0$  is selected from the group consisting of O, S, C(O), S(O), S(O)<sub>2</sub>,  $N(R^{41})$ , and  $ON(R^{41})$ , and  $(CH(R^{41}))_e^-W^{22}$ -( $CH(R^{42})$ )<sub>h</sub> wherein e and h are integers independently selected from 0 through 2 and  $W^{22}$  is selected from the group consisting of  $CR^{41}=CR^{42}$ , 1,2-cyclopropyl, 1,2-cyclobutyl, 1,2-cyclohexyl, 1,3-cyclohexyl, 1,2-cyclopentyl, 1,3-cyclopentyl, 2,3-morpholinyl, 2,4-morpholinyl, 2,6-morpholinyl, 3,4-morpholinyl, 3,5-morpholinyl, 1,2-piperazinyl, 1,3-piperazinyl, 2,3-piperazinyl, 2,6-piperazinyl, 1,2-piperidinyl, 1,3-piperidinyl, 2,3-piperidinyl, 2,4-piperidinyl, 2,6-piperidinyl, 3,4-piperidinyl, 1,2-pyrrolidinyl, 1,3-pyrrolidinyl, 2,3-pyrrolidinyl, 2,4-pyrrolidinyl, 2,5-pyrrolidinyl, 3,4-pyrrolidinyl, 2,3-tetrahydrofuranyl, 2,4-tetrahydrofuranyl, 2,5-tetrahydrofuranyl, and 3,4-tetrahydrofuranyl, with the proviso that  $Z^0$  is directly bonded to the pyridone ring and  $W^{22}$  is optionally

substituted with one or more substituents selected from the group consisting of  $R^9$ ,  $R^{10}$ ,  $R^{11}$ ,  $R^{12}$ , and  $R^{13}$ ;

$R^{41}$  and  $R^{42}$  are independently selected from the group consisting of amidino, hydroxyamino, hydrido, hydroxy, amino, and alkyl;

- 5        Q is selected from the group consisting of hydrido, with the proviso that  $Z^0$  is other than a covalent single bond, the formula (II):



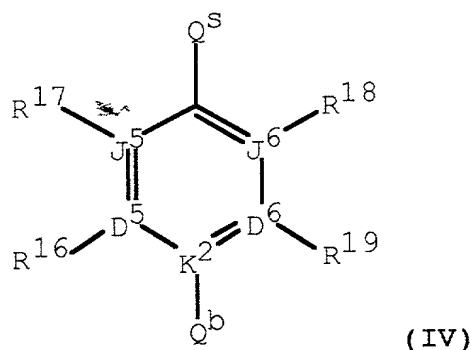
- wherein  $D^1$ ,  $D^2$ ,  $J^1$ ,  $J^2$  and  $K^1$  are independently selected from the group consisting of C, N, O, S and a covalent bond with the provisos that no more than one is a covalent bond, no more than one of  $D^1$ ,  $D^2$ ,  $J^1$ ,  $J^2$  and  $K^1$  is O, no more than one of  $D^1$ ,  $D^2$ ,  $J^1$ ,  $J^2$  and  $K^1$  is S, one of  $D^1$ ,  $D^2$ ,  $J^1$ ,  $J^2$  and  $K^1$  must be a covalent bond when two of  $D^1$ ,  $D^2$ ,  $J^1$ ,  $J^2$  and  $K^1$  are O and S, and no more than four of  $D^1$ ,  $D^2$ ,  $J^1$ ,  $J^2$  and  $K^1$  is N, with the provisos that  $D^1$ ,  $D^2$ ,  $J^1$ ,  $J^2$  and  $K^1$  are selected to maintain an aromatic ring system and that  $R^9$ ,  $R^{10}$ ,  $R^{11}$ ,  $R^{12}$ , and  $R^{13}$  are each independently selected to maintain the tetravalent nature of carbon, trivalent nature of nitrogen, the divalent nature of sulfur, and the divalent nature of oxygen;
- 10         $R^9$ ,  $R^{10}$ ,  $R^{11}$ ,  $R^{12}$ , and  $R^{13}$  are each independently selected to maintain the
- 15        tetravalent nature of carbon, trivalent nature of nitrogen, the divalent nature of sulfur, and the divalent nature of oxygen;

K is  $(CR^{4a}R^{4b})_n$  wherein n is 1 or 2;

- $R^{4a}$  and  $R^{4b}$  are independently selected from the group consisting of
- 20        halo, hydrido, hydroxyalkyl, alkyl, alkoxyalkyl, alkylthioalkyl, and haloalkyl;

$E^0$  is selected from the group consisting of a covalent single bond, C(O), C(S), C(O)N(R<sup>7</sup>), (R<sup>7</sup>)NC(O), S(O)<sub>2</sub>, (R<sup>7</sup>)NS(O)<sub>2</sub>, and S(O)<sub>2</sub>N(R<sup>7</sup>);

$Y^0$  is formula (IV):



- 5 wherein D<sup>5</sup>, D<sup>6</sup>, J<sup>5</sup>, and J<sup>6</sup> are independently selected from the group consisting of C, N, O, S and a covalent bond with the provisos that no more than one is a covalent bond, K<sup>2</sup> is C, no more than one of D<sup>5</sup>, D<sup>6</sup>, J<sup>5</sup>, and J<sup>6</sup> is O, no more than one of D<sup>5</sup>, D<sup>6</sup>, J<sup>5</sup>, and J<sup>6</sup> is S, one of D<sup>5</sup>, D<sup>6</sup>, J<sup>5</sup>, and J<sup>6</sup> must be a covalent bond when two of D<sup>5</sup>, D<sup>6</sup>, J<sup>5</sup>, and J<sup>6</sup> are O and S, and no more
- 10 than four of D<sup>5</sup>, D<sup>6</sup>, J<sup>5</sup>, and J<sup>6</sup> are N when K<sup>2</sup> is carbon, with the provisos that R<sup>16</sup>, R<sup>17</sup>, R<sup>18</sup>, and R<sup>19</sup> are each independently selected to maintain the tetravalent nature of carbon, trivalent nature of nitrogen, the divalent nature of sulfur, and the divalent nature of oxygen and that D<sup>5</sup>, D<sup>6</sup>, J<sup>5</sup>, and J<sup>6</sup> are selected to maintain an aromatic ring system;

- 15  $Q^b$  is selected from the group consisting of NR<sup>20</sup>R<sup>21</sup>, +NR<sup>20</sup>R<sup>21</sup>R<sup>22</sup>, , and hydrido, wherein R<sup>20</sup>, R<sup>21</sup>, and R<sup>22</sup> are independently selected from the group consisting of hydrido, alkyl, hydroxy, amino, dialkylamino, alkylamino, and hydroxyalkyl with the proviso that no more than one of R<sup>20</sup> and R<sup>21</sup> is selected from the group consisting of hydroxy, amino, alkylamino, and
- 20 dialkylamino at the same time;

- $Q^b$  is optionally selected from the group consisting of
- $$C(NR^{25})NR^{23}R^{24}, N(R^{26})C(NR^{25})N(R^{23})(R^{24}),$$
- $$C(O)N(R^{26})C(NR^{25})N(R^{23})(R^{24}), N(R^{26})N(R^{26})C(NR^{25})N(R^{23})(R^{24}),$$
- and  $ON(R^{26})C(NR^{25})N(R^{23})(R^{24})$  with the provisos that no more than one
- 5 of  $R^{23}$ ,  $R^{24}$ , and  $R^{26}$  is selected from the group consisting of hydroxy, amino, alkylamino, and dialkylamino when two of the group consisting of  $R^{23}$ ,  $R^{24}$ , and  $R^{26}$  are bonded to the same atom;

- $R^{23}$ ,  $R^{24}$ ,  $R^{25}$ , and  $R^{26}$  are independently selected from the group consisting of hydrido, alkyl, hydroxy, amino, aminoalkyl, dialkylamino, alkylamino,
- 10 and hydroxyalkyl;

- $Q^s$  is selected from the group consisting of a single covalent bond,  $(CR^{37}R^{38})_b-(W^0)_{az}$  wherein  $az$  is an integer selected from 0 through 1,  $b$  is an integer selected from 1 through 5, and  $W^0$  is selected from the group consisting of O, C(O), S(O), S(O)<sub>2</sub>, S(O)<sub>2</sub>N(R<sup>14</sup>), N(R<sup>14</sup>)S(O)<sub>2</sub>, and N(R<sup>14</sup>),
- 15  $(CH(R^{14}))_c-W^1-(CH(R^{15}))_d$  wherein  $c$  and  $d$  are integers independently selected from 1 through 4 and  $W^1$  is selected from the group consisting of O, S, C(O), C(S), C(O)O, C(S)O, C(O)S, C(S)S, C(O)N(R<sup>14</sup>), (R<sup>14</sup>)NC(O), C(S)N(R<sup>14</sup>), (R<sup>14</sup>)NC(S), OC(O)N(R<sup>14</sup>), (R<sup>14</sup>)NC(O)O, SC(S)N(R<sup>14</sup>), (R<sup>14</sup>)NC(S)S, SC(O)N(R<sup>14</sup>), (R<sup>14</sup>)NC(O)S, OC(S)N(R<sup>14</sup>), (R<sup>14</sup>)NC(S)O,
- 20 N(R<sup>15</sup>)C(O)N(R<sup>14</sup>), (R<sup>14</sup>)NC(O)N(R<sup>15</sup>), N(R<sup>15</sup>)C(S)N(R<sup>14</sup>), (R<sup>14</sup>)NC(S)N(R<sup>15</sup>), S(O), S(O)<sub>2</sub>, S(O)<sub>2</sub>N(R<sup>14</sup>), N(R<sup>14</sup>)S(O)<sub>2</sub>, P(O)(R<sup>8</sup>), N(R<sup>7</sup>)P(O)(R<sup>8</sup>), P(O)(R<sup>8</sup>)N(R<sup>7</sup>), N(R<sup>14</sup>), ON(R<sup>14</sup>), and  $(CH(R^{14}))_e-W^{22}-$

$(\text{CH}(\text{R}^{15}))_h$  wherein e and h are integers independently selected from 0 through 2 and  $\text{W}^{22}$  is selected from the group consisting of  $\text{CR}^{41}=\text{CR}^{42}$ ,  $\text{CR}^{41}\text{R}^{42}=\text{C}$ ; vinylidene), ethynylidene ( $\text{C}\equiv\text{C}$ ; 1,2-ethynyl), 1,2-cyclopropyl, 1,2-cyclobutyl, 1,2-cyclohexyl, 1,3-cyclohexyl, 1,2-cyclopentyl, 1,3-cyclopentyl, 2,3-morpholinyl, 2,4-morpholinyl, 2,6-morpholinyl, 3,4-morpholinyl, 3,5-morpholinyl, 1,2-piperazinyl, 1,3-piperazinyl, 2,3-piperazinyl, 2,6-piperazinyl, 1,2-piperidinyl, 1,3-piperidinyl, 2,3-piperidinyl, 2,4-piperidinyl, 2,6-piperidinyl, 3,4-piperidinyl, 1,2-pyrrolidinyl, 1,3-pyrrolidinyl, 2,3-pyrrolidinyl, 2,4-pyrrolidinyl, 2,5-pyrrolidinyl, 3,4-pyrrolidinyl, 2,3-tetrahydrofuranyl, 2,4-tetrahydrofuranyl, 2,5-tetrahydrofuranyl, and 3,4-tetrahydrofuranyl, with the provisos that  $\text{R}^{14}$  and  $\text{R}^{15}$  are selected from other than halo and cyano when directly bonded to N and that  $(\text{CR}^{37}\text{R}^{38})_b$ ,  $(\text{CH}(\text{R}^{14}))_c$ , and  $(\text{CH}(\text{R}^{14}))_e$  are bonded to  $\text{E}^0$ ;

$\text{Y}^0$  is optionally  $\text{Y}^{\text{AT}}$  wherein  $\text{Y}^{\text{AT}}$  is  $\text{Q}^b\text{-Q}^s$ ;

$\text{Y}^0$  is optionally  $\text{Q}^b\text{-Q}^{\text{ss}}$  wherein  $\text{Q}^{\text{ss}}$  is selected from the group consisting of  $(\text{CR}^{37}\text{R}^{38})_f$  wherein f is an integer selected from 1 through 4,  $(\text{CH}(\text{R}^{14}))_c\text{-W}^1\text{-(CH}(\text{R}^{15}))_d$  wherein c and d are integers independently selected from 1 through 2, and  $\text{W}^1$  is selected from the group consisting of  $\text{W}^1$  is selected from the group consisting of O, S,  $\text{C}(\text{O})$ ,  $\text{C}(\text{O})\text{N}(\text{R}^{14})$ ,  $(\text{R}^{14})\text{NC}(\text{O})$ ,  $\text{N}(\text{R}^{15})\text{C}(\text{O})\text{N}(\text{R}^{14})$ ,  $(\text{R}^{14})\text{NC}(\text{O})\text{N}(\text{R}^{15})$ ,  $\text{N}(\text{R}^{14})$ ,  $\text{ON}(\text{R}^{14})$ , and  $(\text{CH}(\text{R}^{14}))_e\text{-W}^2\text{-(CH}(\text{R}^{15}))_h$  wherein e and h are integers independently selected from 0 through 2 and  $\text{W}^2$  is selected from the group consisting of  $\text{CR}^{4a}=\text{CR}^{4b}$ , ethynylidene ( $\text{C}\equiv\text{C}$ ; 1,2-ethynyl), and  $\text{C}=\text{CR}^{4a}\text{R}^{4b}$  with the provisos that  $\text{R}^{14}$  and  $\text{R}^{15}$  are selected from other than halo when directly

bonded to N and that  $(\text{CR}^{37}\text{R}^{38})_f$ ,  $(\text{CH}(\text{R}^{14}))_c$ , and  $(\text{CH}(\text{R}^{14}))_e$  are bonded to  $\text{E}^0$ ;

$\text{Y}^0$  is optionally  $\text{Q}^b\text{-Q}^{\text{sss}}$  wherein  $\text{Q}^{\text{sss}}$  is  $(\text{CH}(\text{R}^{38}))_r\text{-W}^3$ ,  $r$  is an

integer selected from 1 through 2,  $\text{W}^3$  is selected from the group consisting of

- 5 1,1-cyclopropyl, 1,2-cyclopropyl, 1,1-cyclobutyl, 1,2-cyclobutyl, 1,2-cyclohexyl, 1,3-cyclohexyl, 1,4-cyclohexyl, 1,2-cyclopentyl, 1,3-cyclopentyl, 2,3-morpholinyl, 2,4-morpholinyl, 2,5-morpholinyl, 2,6-morpholinyl, 3,4-morpholinyl, 3,5-morpholinyl, 1,2-piperazinyl, 1,3-piperazinyl, 1,4-piperazinyl, 2,3-piperazinyl, 2,5-piperazinyl, 2,6-piperazinyl, 1,2-piperidinyl, 1,3-piperidinyl, 10 1,4-piperidinyl, 2,3-piperidinyl, 2,4-piperidinyl, 2,5-piperidinyl, 2,6-piperidinyl, 3,4-piperidinyl, 3,5-piperidinyl, 3,6-piperidinyl, 1,2-pyrrolidinyl, 1,3-pyrrolidinyl, 2,3-pyrrolidinyl, 2,4-pyrrolidinyl, 2,5-pyrrolidinyl, 3,4-pyrrolidinyl, 2H-2,3-pyranyl, 2H-2,4-pyranyl, 2H-2,5-pyranyl, 4H-2,3-pyranyl, 4H-2,4-pyranyl, 4H-2,5-pyranyl, 2H-pyran-2-one-3,4-yl, 2H-pyran-2-one-4,5-yl, 4H-pyran-4-one-2,3-yl, 2,3-tetrahydrofuranyl, 2,4-tetrahydrofuranyl, 2,5-tetrahydrofuranyl, 3,4-tetrahydrofuranyl, 2,3-tetrahydropyranyl, 2,4-tetrahydropyranyl, 2,5-tetrahydropyranyl, 2,6-tetrahydropyranyl, 3,4-tetrahydropyranyl, and 3,5-tetrahydropyranyl, and each carbon and hyrido containing nitrogen member of the ring of the  $\text{W}^3$  other than the points of
- 20 attachment is optionally substituted with one or more of the group consisting of  $\text{R}^9$ ,  $\text{R}^{10}$ ,  $\text{R}^{11}$ , and  $\text{R}^{12}$ , with the proviso that  $(\text{CH}(\text{R}^{38}))_r$  is bonded to  $\text{E}^0$  and  $\text{Q}^b$  is bonded to lowest numbered substituent position of each  $\text{W}^3$ ;

$\text{Y}^0$  is optionally  $\text{Q}^b\text{-Q}^{\text{sssr}}$  wherein  $\text{Q}^{\text{sssr}}$  is  $(\text{CH}(\text{R}^{38}))_r\text{-W}^4$ ,  $r$  is an

integer selected from 1 through 2,  $\text{W}^4$  is selected from the group consisting of

- 25 1,2-cyclobutyl, 1,2-cyclohexyl, 1,3-cyclohexyl, 1,4-cyclohexyl, 1,2-cyclopentyl, 1,3-cyclopentyl, 2,3-morpholinyl, 2,4-morpholinyl, 2,5-morpholinyl, 2,6-morpholinyl, 3,4-morpholinyl, 3,5-morpholinyl, 1,2-piperazinyl, 1,3-piperazinyl, 1,4-piperazinyl, 2,3-piperazinyl, 2,5-piperazinyl, 2,6-piperazinyl, 1,2-piperidinyl, 1,3-piperidinyl, 1,4-piperidinyl, 2,3-piperidinyl, 2,4-piperidinyl, 2,5-piperidinyl, 30 2,6-piperidinyl, 3,4-piperidinyl, 3,5-piperidinyl, 3,6-piperidinyl, 1,2-pyrrolidinyl,

1,3-pyrrolidinyl, 2,3-pyrrolidinyl, 2,4-pyrrolidinyl, 2,5-pyrrolidinyl, 3,4-pyrrolidinyl, 2H-2,3-pyranyl, 2H-2,4-pyranyl, 2H-2,5-pyranyl, 4H-2,3-pyranyl, 4H-2,4-pyranyl, 4H-2,5-pyranyl, 2H-pyran-2-one-3,4-yl, 2H-pyran-2-one-4,5-yl, 4H-pyran-4-one-2,3-yl, 2,3-tetrahydrofuranyl, 2,4-tetrahydrofuranyl, 2,5-tetrahydrofuranyl, 3,4-tetrahydrofuranyl, 2,3-tetrahydropyranyl, 2,4-tetrahydropyranyl, 2,5-tetrahydropyranyl, 2,6-tetrahydropyranyl, 3,4-tetrahydropyranyl, and 3,5-tetrahydropyranyl, and each carbon and hyrido containing nitrogen member of the ring of the  $W^4$  other than the points of attachment is optionally substituted with one or more of the group consisting of  $R^9$ ,  $R^{10}$ ,  $R^{11}$ , and  $R^{12}$ , with the provisos that  $(CH(R^{38}))_r$  is bonded to  $E^0$  and  $Q^b$  is bonded to highest number substituent position of each  $W^4$ ;

$Y^0$  is optionally  $Q^b-Q^{ssss}$  wherein  $Q^{ssss}$  is  $(CH(R^{38}))_r-W^5$ ,  $r$  is an integer selected from 1 through 2,  $W^5$  is selected from the group consisting of 1,4-indenyl, 1,5-indenyl, 1,6-indenyl, 1,7-indenyl, 2,7-indenyl, 2,6-indenyl, 2,5-indenyl, 2,4-indenyl, 3,4-indenyl, 3,5-indenyl, 3,6-indenyl, 3,7-indenyl, 2,4-benzofuranyl, 2,5-benzofuranyl, 2,6-benzofuranyl, 2,7-benzofuranyl, 3,4-benzofuranyl, 3,5-benzofuranyl, 3,6-benzofuranyl, 3,7-benzofuranyl, 2,4-benzothiophenyl, 2,5-benzothiophenyl, 2,6-benzothiophenyl, 2,7-benzothiophenyl, 3,4-benzothiophenyl, 3,5-benzothiophenyl, 3,6-benzothiophenyl, 3,7-benzothiophenyl, 2,7-imidazo(1,2-a)pyridinyl, 3,4-imidazo(1,2-a)pyridinyl, 3,5-imidazo(1,2-a)pyridinyl, 3,6-imidazo(1,2-a)pyridinyl, 3,7-imidazo(1,2-a)pyridinyl, 2,4-indolyl, 2,5-indolyl, 2,6-indolyl, 2,7-indolyl, 3,4-indolyl, 3,5-indolyl, 3,6-indolyl, 3,7-indolyl, 1,4-isoindolyl, 1,5-isoindolyl, 1,6-isoindolyl, 2,4-isoindolyl, 2,5-isoindolyl, 2,6-isoindolyl, 2,7-isoindolyl, 1,3-isoindolyl, 3,4-indazolyl, 3,5-indazolyl, 3,6-indazolyl, 3,7-indazolyl, 2,4-benzoxazolyl, 2,5-benzoxazolyl, 2,6-benzoxazolyl, 2,7-benzoxazolyl, 3,4-benzisoxazolyl, 3,5-benzisoxazolyl, 3,6-benzisoxazolyl, 3,7-benzisoxazolyl, 1,4-naphthyl, 1,5-naphthyl, 1,6-naphthyl, 1,7-naphthyl, 1,8-naphthyl, 2,4-naphthyl, 2,5-naphthyl, 2,6-naphthyl, 2,7-naphthyl, 2,8-naphthyl, 2,4-quinolinyl, 2,5-quinolinyl, 2,6-quinolinyl, 2,7-quinolinyl, 2,8-quinolinyl, 3,4-quinolinyl, 3,5-quinolinyl, 3,6-quinolinyl, 3,7-quinolinyl, 3,8-quinolinyl, 4,5-quinolinyl, 4,6-quinolinyl, 4,7-quinolinyl, 4,8-quinolinyl, 1,4-isoquinolinyl, 1,5-

- isoquinolinyl, 1,6-isoquinolinyl, 1,7-isoquinolinyl, 1,8-isoquinolinyl, 3,4-isoquinolinyl, 3,5-isoquinolinyl, 3,6-isoquinolinyl, 3,7-isoquinolinyl, 3,8-isoquinolinyl, 4,5-isoquinolinyl, 4,6-isoquinolinyl, 4,7-isoquinolinyl, 4,8-isoquinolinyl, 3,4-cinnolinyl, 3,5-cinnolinyl, 3,6-cinnolinyl, 3,7-cinnolinyl, 3,8-cinnolinyl, 4,5-cinnolinyl, 4,6-cinnolinyl, 4,7-cinnolinyl, and 4,8-cinnolinyl, and  
 5 each carbon and hyrido containing nitrogen member of the ring of the  $W^5$  other than the points of attachment is optionally substituted with one or more of the group consisting of  $R^9$ ,  $R^{10}$ ,  $R^{11}$ , and  $R^{12}$ , with the proviso that  $Q^b$  is bonded to lowest number substituent position of each  $W^5$  and that  $(CH(R^{38}))_r$   
 10 is bonded to  $E^0$ ;

- $Y^0$  is optionally  $Q^b-Q^{sssr}$  wherein  $Q^{sssr}$  is  $(CH(R^{38}))_r-W^6$ ,  $r$  is an integer selected from 1 through 2,  $W^6$  is selected from the group consisting of 1,4-indenyl, 1,5-indenyl, 1,6-indenyl, 1,7-indenyl, 2,7-indenyl, 2,6-indenyl, 2,5-indenyl, 2,4-indenyl, 3,4-indenyl, 3,5-indenyl, 3,6-indenyl, 3,7-indenyl, 2,4-benzofuranyl, 2,5-benzofuranyl, 2,6-benzofuranyl, 2,7-benzofuranyl, 3,4-benzofuranyl, 3,5-benzofuranyl, 3,6-benzofuranyl, 3,7-benzofuranyl, 2,4-benzothiophenyl, 2,5-benzothiophenyl, 2,6-benzothiophenyl, 2,7-benzothiophenyl, 3,4-benzothiophenyl, 3,5-benzothiophenyl, 3,6-benzothiophenyl, 3,7-benzothiophenyl, 2,7-imidazo(1,2-a)pyridinyl, 3,4-imidazo(1,2-a)pyridinyl, 3,5-imidazo(1,2-a)pyridinyl, 3,6-imidazo(1,2-a)pyridinyl, 3,7-imidazo(1,2-a)pyridinyl, 2,4-indolyl, 2,5-indolyl, 2,6-indolyl, 2,7-indolyl, 3,4-indolyl, 3,5-indolyl, 3,6-indolyl, 3,7-indolyl, 1,4-isoindolyl, 1,5-isoindolyl, 1,6-isoindolyl, 2,4-isoindolyl, 2,5-isoindolyl, 2,6-isoindolyl, 2,7-isoindolyl, 1,3-isoindolyl, 3,4-indazolyl, 3,5-indazolyl, 3,6-indazolyl, 3,7-indazolyl, 2,4-benzoxazolyl, 2,5-benzoxazolyl, 2,6-benzoxazolyl, 2,7-benzoxazolyl, 3,4-benzisoxazolyl, 3,5-benzisoxazolyl, 3,6-benzisoxazolyl, 3,7-benzisoxazolyl, 1,4-naphthyl, 1,5-naphthyl, 1,6-naphthyl, 1,7-naphthyl, 1,8-naphthyl, 2,4-naphthyl, 2,5-naphthyl, 2,6-naphthyl, 2,7-naphthyl, 2,8-naphthyl, 2,4-quinolinyl, 2,5-quinolinyl, 2,6-quinolinyl, 2,7-quinolinyl, 2,8-quinolinyl, 3,4-quinolinyl, 3,5-quinolinyl, 3,6-quinolinyl, 3,7-quinolinyl, 3,8-quinolinyl, 4,5-quinolinyl, 4,6-quinolinyl, 4,7-quinolinyl, 4,8-quinolinyl, 1,4-isoquinolinyl, 1,5-isoquinolinyl, 1,6-isoquinolinyl, 1,7-isoquinolinyl, 1,8-isoquinolinyl, 3,4-
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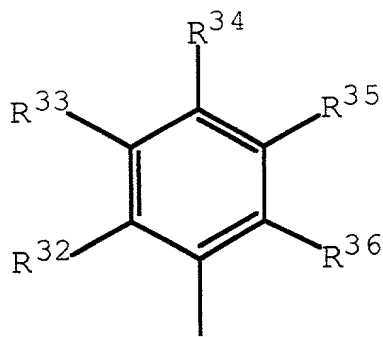
isoquinolinyl, 3,5-isoquinolinyl, 3,6-isoquinolinyl, 3,7-isoquinolinyl, 3,8-isoquinolinyl, 4,5-isoquinolinyl, 4,6-isoquinolinyl, 4,7-isoquinolinyl, 4,8-isoquinolinyl, 3,4-cinnolinyl, 3,5-cinnolinyl, 3,6-cinnolinyl, 3,7-cinnolinyl, 3,8-cinnolinyl, 4,5-cinnolinyl, 4,6-cinnolinyl, 4,7-cinnolinyl, and 4,8-cinnolinyl, and

- 5 each carbon and hydrido containing nitrogen member of the ring of the  $W^6$  other than the points of attachment is optionally substituted with one or more of the group consisting of  $R^9$ ,  $R^{10}$ ,  $R^{11}$ , and  $R^{12}$ , with the proviso that  $Q^b$  is bonded to highest number substituent position of each  $W^6$  and that  $(CH(R^{38}))_r$  is bonded to  $E^0$ .

- 10 In a preferred embodiment of compounds of Formula I or a pharmaceutically acceptable salt thereof,

J is O;

B is the Formula:



- 15  $R^9$ ,  $R^{10}$ ,  $R^{11}$ ,  $R^{12}$ ,  $R^{13}$ ,  $R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$  are

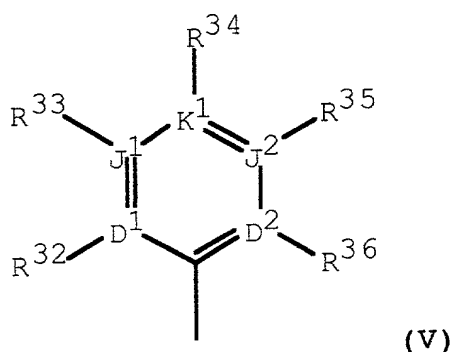
independently selected from the group consisting of hydrido, acetamido, haloacetamido, amidino, guanidino, alkylenedioxy, haloalkylthio, alkanoyloxy, alkoxy, alkoxyalkyl, haloalkoxyalkyl, hydroxy, amino, alkoxyamino, nitro, alkylamino, alkylthio, alkylthioalkyl, alkylsulfinyl, alkylsulfonyl, alkylsulfonylalkyl, aryl, aralkyl, cycloalkyl, cycloalkylalkyl, alkylsulfonamido, alkylaminosulfonyl, amidosulfonyl, monoalkyl amidosulfonyl, dialkyl amidosulfonyl, alkanoyl, haloalkanoyl, alkyl, alkenyl, halo, haloalkyl, haloalkenyl, haloalkoxy, hydroxyhaloalkyl, hydroxyalkyl, aminoalkyl, haloalkoxyalkyl, carboxyalkyl, carboalkoxy, carboxy, carboxamido, carboxamidoalkyl, and cyano;

$R^9, R^{10}, R^{11}, R^{12}$ , and  $R^{13}$  are optionally selected from the group consisting of heteroaryl and heterocyclyl with the proviso that  $R^9, R^{10}, R^{11}, R^{12}$ , and  $R^{13}$  are substituents for other than B;

$R^{16}, R^{19}, R^{32}, R^{33}, R^{34}, R^{35}$ , and  $R^{36}$  are independently optionally

5  $Q^b$ ;

B is optionally, with the proviso that  $R^1$  and  $R^2$  are selected from the group consisting of a spacer pair and  $-W=X-Y=Z-$ , Formula (V):



wherein  $D^1, D^2, J^1, J^2$  and  $K^1$  are independently selected from the group consisting of C, N, O, S and a covalent bond with the provisos that no more than one is a covalent bond, no more than one of  $D^1, D^2, J^1, J^2$  and  $K^1$  is O, no more than one of  $D^1, D^2, J^1, J^2$  and  $K^1$  is S, one of  $D^1, D^2, J^1, J^2$  and  $K^1$  must be a covalent bond when two of  $D^1, D^2, J^1, J^2$  and  $K^1$  are O and S, and no more than four of  $D^1, D^2, J^1, J^2$  and  $K^1$  are N;

15 B is optionally selected from the group consisting of hydrido, trialkylsilyl, C2-C8 alkyl, C3-C8 alkylenyl, C3-C8 alkenyl, C3-C8 alkynyl, and C2-C8 haloalkyl, wherein each member of group B is optionally substituted at any carbon up to and including 6 atoms from the point of attachment of B to A with one or more of the group consisting of  $R^{32}, R^{33}, R^{34}, R^{35}$ , and  $R^{36}$ ;

B is selected from the group consisting of C3-C12 cycloalkyl and C4 heterocyclyl, wherein each ring carbon is optionally substituted with  $R^{33}$ , a ring carbon other than the ring carbon at the point of attachment of B to A is optionally substituted with oxo provided that no more than one ring carbon is substituted by oxo at the same time, ring carbons and a nitrogen adjacent to the carbon at the point of attachment are optionally substituted with  $R^9$  or  $R^{13}$ , a ring carbon or nitrogen adjacent to the  $R^9$  position and two atoms from the point of attachment is optionally substituted with  $R^{10}$ , a ring carbon or nitrogen adjacent to the  $R^{13}$  position and two atoms from the point of attachment is optionally substituted with  $R^{12}$ , a ring carbon or nitrogen three atoms from the point of attachment and adjacent to the  $R^{10}$  position is optionally substituted with  $R^{11}$ , a ring carbon or nitrogen three atoms from the point of attachment and adjacent to the  $R^{12}$  position is optionally substituted with  $R^{33}$ , and a ring carbon or nitrogen four atoms from the point of attachment and adjacent to the  $R^{11}$  and  $R^{33}$  positions is optionally substituted with  $R^{34}$ ;

B is optionally, with the proviso that  $R^1$  and  $R^2$  are selected from the group consisting of a spacer pair and  $-W=X-Y=Z-$ , a C5-C9 saturated heterocyclyl, wherein each ring carbon is optionally substituted with  $R^{33}$ , a ring carbon other than the ring carbon at the point of attachment of B to A is optionally substituted with oxo provided that no more than one ring carbon is substituted by oxo at the same time, ring carbons and nitrogen adjacent to the carbon atom at the point of attachment are optionally substituted with  $R^9$  or  $R^{13}$ , a ring carbon or nitrogen adjacent to the  $R^9$  position and two atoms from the point of attachment is optionally substituted with  $R^{10}$ , a ring carbon or nitrogen adjacent to the  $R^{13}$  position and two atoms from the point of

attachment is optionally substituted with  $R^{12}$ , a ring carbon or nitrogen three atoms from the point of attachment and adjacent to the  $R^{10}$  position is optionally substituted with  $R^{11}$ , a ring carbon or nitrogen three atoms from the point of attachment and adjacent to the  $R^{12}$  position is optionally substituted with  $R^{33}$ , and a ring carbon or nitrogen four atoms from the point of attachment and adjacent to the  $R^{11}$  and  $R^{33}$  positions is optionally substituted with  $R^{34}$ ;

A is selected from the group consisting of single covalent bond,  $(W^7)_{rr}-(CH(R^{15}))_{pa}$  and  $(CH(R^{15}))_{pa}-(W^7)_{rr}$  wherein  $rr$  is an integer selected from 0 through 1,  $pa$  is an integer selected from 0 through 6, and  $W^7$  is selected from the group consisting of O, S, C(O),  $(R^7)NC(O)$ ,  $(R^7)NC(S)$ , and  $N(R^7)$  with the proviso that no more than one of the group consisting of  $rr$  and  $pa$  is 0 at the same time;

$R^7$  is selected from the group consisting of hydrido, hydroxy, and alkyl;

$R^{15}$  is selected from the group consisting of hydrido, hydroxy, halo, alkyl, and haloalkyl;

$\Psi$  is selected from the group consisting of NH and NOH;

$R^1$  and  $X^0$  are independently selected from the group consisting of hydrido, alkyl, alkenyl, cyano, halo, haloalkyl, haloalkoxy, haloalkylthio, amino, aminoalkyl, alkylamino, amidino, hydroxy, hydroxyamino, alkoxy, hydroxyalkyl, alkoxyamino, thiol, and alkylthio;

$X^0$  and  $R^1$  and  $R^1$  and  $R^2$ , with the proviso that no more than one of the group consisting of spacer pair  $X^0$  and  $R^1$  and spacer pair  $R^1$  and  $R^2$  is be used at the same time, are optionally selected to be  $-W=X-Y=Z-$  wherein -

W=X-Y=Z- forms a ring selected from the group consisting of a heteroaryl ring having from 5 through 6 members and an aryl;

W, X, Y, and Z are independently selected from the group consisting of  $C(R^9)$ ,  $C(R^{10})$ ,  $C(R^{11})$ ,  $C(R^{12})$ , N,  $N(R^{10})$ , O, S and a covalent bond with the

- 5 provisos that W, X, Y, and Z can be independently selected to be a covalent bond when one of W, X, Y, and Z is selected from the group consisting of N,  $N(R^{10})$ , O, and S, no more than one of W, X, Y, and Z can be selected from the group consisting of O and S, and no more than three of W, X, Y, and Z can be selected from the group consisting of N and  $N(R^{10})$ ;

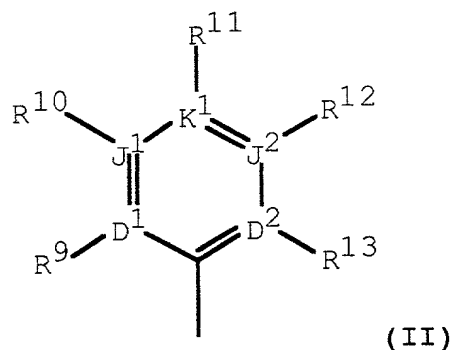
- 10  $X^0$  and  $R^1$  and  $R^1$  and  $R^2$  spacer pairs are independently optionally selected to be taken together to form a spacer pair wherein the spacer pair forms a linear moiety having from 3 through 6 atoms connecting the points of bonding of said spacer pair members to form a ring selected from the group consisting of a cycloalkenyl ring having from 5 through 8 members and a  
15 partially saturated heterocyclyl ring having from 5 through 8 members, wherein said spacer pair is optionally substituted with one or more of the group consisting of  $R^9$ ,  $R^{10}$ ,  $R^{11}$ ,  $R^{12}$ , and  $R^{13}$  and with the proviso that no more than one of the group consisting of spacer pair  $X^0$  and  $R^1$  and spacer pair  $R^1$  and  $R^2$  is present at the same time;

- 20  $R^2$  is  $Z^0$ -Q;

- $Z^0$  is selected from the group consisting of covalent single bond,  $(CR^{41}R^{42})_q$  wherein q is an integer selected from 1 through 3,  $(CH(R^{41}))_g$ - $W^0$ -( $CH(R^{42}))_p$  wherein g and p are integers independently selected from 0 through 3 and  $W^0$  is selected from the group consisting of O, S, C(O), S(O),  
25  $N(R^{41})$ , and  $ON(R^{41})$ , and  $(CH(R^{41}))_e$ - $W^{22}$ -( $CH(R^{42}))_h$  wherein e and h are integers independently selected from 0 through 1 and  $W^{22}$  is selected from the group consisting of  $CR^{41}=CR^{42}$ , 1,2-cyclopropyl, 1,2-cyclobutyl, 1,2-

cyclohexyl, 1,3-cyclohexyl, 1,2-cyclopentyl, 1,3-cyclopentyl, 2,3-morpholinyl, 2,4-morpholinyl, 2,6-morpholinyl, 3,4-morpholinyl, 3,5-morpholinyl, 1,2-piperazinyl, 1,3-piperazinyl, 2,3-piperazinyl, 2,6-piperazinyl, 1,2-piperidinyl, 1,3-piperidinyl, 2,3-piperidinyl, 2,4-piperidinyl, 2,6-piperidinyl, 3,4-piperidinyl, 1,2-pyrrolidinyl, 1,3-pyrrolidinyl, 2,3-pyrrolidinyl, 2,4-pyrrolidinyl, 2,5-pyrrolidinyl, 3,4-pyrrolidinyl, 2,3-tetrahydrofuranyl, 2,4-tetrahydrofuranyl, 2,5-tetrahydrofuranyl, and 3,4-tetrahydrofuranyl, with the proviso that  $Z^0$  is directly bonded to the pyridone ring;

$R^{41}$  and  $R^{42}$  are independently selected from the group consisting of  
 10 amidino, hydroxyamino, hydrido, hydroxy, amino, and alkyl;  
 Q is selected from the group consisting of hydrido, with the proviso that  $Z^0$  is other than a covalent single bond, and the formula (II):



wherein  $D^1$ ,  $D^2$ ,  $J^1$ ,  $J^2$  and  $K^1$  are independently selected from the group  
 15 consisting of C, N, O, S and a covalent bond with the provisos that no more than one is a covalent bond, no more than one of  $D^1$ ,  $D^2$ ,  $J^1$ ,  $J^2$  and  $K^1$  is O, no more than one of  $D^1$ ,  $D^2$ ,  $J^1$ ,  $J^2$  and  $K^1$  is S, one of  $D^1$ ,  $D^2$ ,  $J^1$ ,  $J^2$  and  $K^1$  must be a covalent bond when two of  $D^1$ ,  $D^2$ ,  $J^1$ ,  $J^2$  and  $K^1$  are O and S, and no more than four of  $D^1$ ,  $D^2$ ,  $J^1$ ,  $J^2$  and  $K^1$  are N, with the proviso that  $R^9$ ,  
 20  $R^{10}$ ,  $R^{11}$ ,  $R^{12}$ , and  $R^{13}$  are each independently selected to maintain the tetravalent nature of carbon, trivalent nature of nitrogen, the divalent nature of sulfur, and the divalent nature of oxygen;

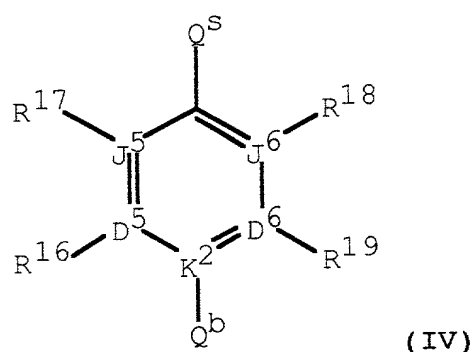
K is  $(\text{CR}^{4a}\text{R}^{4b})_n$  wherein n is an integer selected from 1 through 2;

$\text{R}^{4a}$  and  $\text{R}^{4b}$  are independently selected from the group consisting of halo, hydrido, hydroxyalkyl, alkyl, alkoxyalkyl, alkylthioalkyl, and haloalkyl;

$\text{E}^0$  is  $\text{E}^1$ , when K is  $(\text{CR}^{4a}\text{R}^{4b})_n$ , wherein  $\text{E}^1$  is selected from the group

- 5 consisting of a covalent single bond, C(O), C(S), C(O)N(R<sup>7</sup>), (R<sup>7</sup>)NC(O), S(O)<sub>2</sub>, (R<sup>7</sup>)NS(O)<sub>2</sub>, and S(O)<sub>2</sub>N(R<sup>7</sup>);

$\text{Y}^0$  is formula (IV):



wherein  $\text{D}^5$ ,  $\text{D}^6$ ,  $\text{J}^5$ , and  $\text{J}^6$  are independently selected from the group

- 10 consisting of C, N, O, S and a covalent bond with the provisos that no more than one is a covalent bond,  $\text{K}^2$  is C, no more than one of  $\text{D}^5$ ,  $\text{D}^6$ ,  $\text{J}^5$ , and  $\text{J}^6$  is O, no more than one of  $\text{D}^5$ ,  $\text{D}^6$ ,  $\text{J}^5$ , and  $\text{J}^6$  is S, one of  $\text{D}^5$ ,  $\text{D}^6$ ,  $\text{J}^5$ , and  $\text{J}^6$  must be a covalent bond when two of  $\text{D}^5$ ,  $\text{D}^6$ ,  $\text{J}^5$ , and  $\text{J}^6$  are O and S, and no more than four of  $\text{D}^5$ ,  $\text{D}^6$ ,  $\text{J}^5$ , and  $\text{J}^6$  are N with the proviso that  $\text{R}^{16}$ ,  $\text{R}^{17}$ ,  $\text{R}^{18}$ , and
- 15  $\text{R}^{19}$  are each independently selected to maintain the tetravalent nature of carbon, trivalent nature of nitrogen, the divalent nature of sulfur, and the divalent nature of oxygen;

$\text{R}^{16}$ ,  $\text{R}^{17}$ ,  $\text{R}^{18}$ , and  $\text{R}^{19}$  are independently selected from the group

- 20 consisting of hydrido, amidino, guanidino, carboxy, haloalkylthio, alkoxy, hydroxy, amino, nitro, alkoxyamino, alkylamino, alkylthio, alkylsulfinyl,

alkylsulfonyl, alkanoyl, haloalkanoyl, alkyl, alkenyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, alkylenylamino, haloalkoxyalkyl, carboalkoxy, and cyano;

$Q^b$  is selected from the group consisting of  $NR^{20}R^{21}$ ,  $Q^{be}$  wherein  $Q^{be}$  is hydrido,  $N(R^{26})C(NR^{25})N(R^{23})(R^{24})$ , and  $C(NR^{25})NR^{23}R^{24}$ , with

- 5 the provisos that no more than one of  $R^{20}$  and  $R^{21}$  is hydroxy, amino, alkylamino, or dialkylamino at the same time and that no more than one of  $R^{23}$  and  $R^{24}$  is hydroxy, amino, alkylamino, or dialkylamino at the same time;

- $R^{20}$ ,  $R^{21}$ ,  $R^{23}$ ,  $R^{24}$ ,  $R^{25}$ , and  $R^{26}$  are independently selected from the group consisting of hydrido, alkyl, hydroxy, amino, aminoalkyl, dialkylamino, 10 alkylamino, and hydroxyalkyl;

- $Q^s$  is selected from the group consisting of a single covalent bond,  $(CR^{37}R^{38})_b$  wherein b is an integer selected from 1 through 4, and  $(CH(R^{14}))_c-W^1-(CH(R^{15}))_d$  wherein c and d are integers independently selected from 1 through 3 and  $W^1$  is selected from the group consisting of 15  $C(O)N(R^{14})$ ,  $(R^{14})NC(O)$ ,  $S(O)$ ,  $S(O)_2$ ,  $S(O)_2N(R^{14})$ ,  $N(R^{14})S(O)_2$ , and  $N(R^{14})$ , with the provisos that  $R^{14}$  is selected from other than halo when directly bonded to N and that  $(CR^{37}R^{38})_b$ , and  $(CH(R^{14}))_c$  are bonded to  $E^0$ ;

$R^{14}$  is selected from the group consisting of hydrido, halo, alkyl, and haloalkyl;

- 20  $R^{37}$  and  $R^{38}$  are independently selected from the group consisting of hydrido, alkyl, and haloalkyl;

$R^{38}$  is optionally selected from the group consisting of aroyl and heteroaroyl;



$Y^0$  is optionally  $Q^b-Q^{ss}$  wherein  $Q^{ss}$  is  $(CH(R^{14}))_e-W^2-(CH(R^{15}))_h$ ,  
 wherein e and h are integers independently selected from 1 through 2 and  $W^2$   
 is  $CR^{4a}=CR^{4b}$  with the proviso that  $(CH(R^{14}))_e$  is bonded to  $E^0$ ;

$Y^0$  is optionally selected from the group consisting of  $Q^b-Q^{ssss}$  and  
 5  $Q^b-Q^{sssr}$  wherein  $Q^{ssss}$  is  $(CH(R^{38}))_r-W^5$  and  $Q^{sssr}$  is  $(CH(R^{38}))_r-W^6$ , r is  
 an integer selected from 1 through 2, and  $W^5$  and  $W^6$  are independently  
 selected from the group consisting of 1,4-indenyl, 1,5-indenyl, 1,6-indenyl, 1,7-  
 indenyl, 2,7-indenyl, 2,6-indenyl, 2,5-indenyl, 2,4-indenyl, 3,4-indenyl, 3,5-  
 indenyl, 3,6-indenyl, 3,7-indenyl, 2,4-benzofuranyl, 2,5-benzofuranyl, 2,6-  
 10 benzofuranyl, 2,7-benzofuranyl, 3,4-benzofuranyl, 3,5-benzofuranyl, 3,6-  
 benzofuranyl, 3,7-benzofuranyl, 2,4-benzothiophenyl, 2,5-benzothiophenyl, 2,6-  
 benzothiophenyl, 2,7-benzothiophenyl, 3,4-benzothiophenyl, 3,5-  
 benzothiophenyl, 3,6-benzothiophenyl, 3,7-benzothiophenyl, 2,7-imidazo(1,2-  
 a)pyridinyl, 3,4-imidazo(1,2-a)pyridinyl, 3,5-imidazo(1,2-a)pyridinyl, 3,6-  
 15 imidazo(1,2-a)pyridinyl, 3,7-imidazo(1,2-a)pyridinyl, 2,4-indolyl, 2,5-indolyl,  
 2,6-indolyl, 2,7-indolyl, 3,4-indolyl, 3,5-indolyl, 3,6-indolyl, 3,7-indolyl, 1,4-  
 isoindolyl, 1,5-isoindolyl, 1,6-isoindolyl, 2,4-isoindolyl, 2,5-isoindolyl, 2,6-  
 isoindolyl, 2,7-isoindolyl, 1,3-isoindolyl, 3,4-indazolyl, 3,5-indazolyl, 3,6-  
 indazolyl, 3,7-indazolyl, 2,4-benzoxazolyl, 2,5-benzoxazolyl, 2,6-benzoxazolyl,  
 20 2,7-benzoxazolyl, 3,4-benzisoxazolyl, 3,5-benzisoxazolyl, 3,6-benzisoxazolyl,  
 3,7-benzisoxazolyl, 1,4-naphthyl, 1,5-naphthyl, 1,6-naphthyl, 1,7-naphthyl, 1,8-  
 naphthyl, 2,4-naphthyl, 2,5-naphthyl, 2,6-naphthyl, 2,7-naphthyl, 2,8-naphthyl,  
 2,4-quinolinyl, 2,5-quinolinyl, 2,6-quinolinyl, 2,7-quinolinyl, 2,8-quinolinyl, 3,4-  
 quinolinyl, 3,5-quinolinyl, 3,6-quinolinyl, 3,7-quinolinyl, 3,8-quinolinyl, 4,5-  
 25 quinolinyl, 4,6-quinolinyl, 4,7-quinolinyl, 4,8-quinolinyl, 1,4-isoquinolinyl, 1,5-  
 isoquinolinyl, 1,6-isoquinolinyl, 1,7-isoquinolinyl, 1,8-isoquinolinyl, 3,4-  
 isoquinolinyl, 3,5-isoquinolinyl, 3,6-isoquinolinyl, 3,7-isoquinolinyl, 3,8-  
 isoquinolinyl, 4,5-isoquinolinyl, 4,6-isoquinolinyl, 4,7-isoquinolinyl, 4,8-  
 isoquinolinyl, 3,4-cinnolinyl, 3,5-cinnolinyl, 3,6-cinnolinyl, 3,7-cinnolinyl, 3,8-  
 30 cinnolinyl, 4,5-cinnolinyl, 4,6-cinnolinyl, 4,7-cinnolinyl, and 4,8-cinnolinyl, and  
 each carbon and hyrido containing nitrogen member of the ring of the  $W^5$  and

of the ring of the  $W^6$ , other than the points of attachment of  $W^5$  and  $W^6$ , is optionally substituted with one or more of the group consisting of  $R^9$ ,  $R^{10}$ ,  $R^{11}$ , and  $R^{12}$ , with the provisos that  $Q^b$  is bonded to lowest number substituent position of each  $W^5$ ,  $Q^b$  is bonded to highest number substituent position of each  $W^6$ , and  $(CH(R^{38}))_r$  is bonded to  $E^0$ .

In another preferred embodiment of compounds of Formula I or a pharmaceutically acceptable salt thereof,

J is O;

B is phenyl or a heteroaryl of 5 or 6 ring members, wherein a nitrogen with a removable hydrogen or a carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^{32}$ , a nitrogen with a removable hydrogen or a carbon at the other position adjacent to the point of attachment is optionally substituted by  $R^{36}$ , a nitrogen with a removable hydrogen or a carbon adjacent to  $R^{32}$  and two atoms from the point of attachment is optionally substituted by  $R^{33}$ , a nitrogen with a removable hydrogen or a carbon adjacent to  $R^{36}$  and two atoms from the point of attachment is optionally substituted by  $R^{35}$ , and a nitrogen with a removable hydrogen or a carbon adjacent to both  $R^{33}$  and  $R^{35}$  is substituted by  $R^{34}$ ;

$R^9$ ,  $R^{10}$ ,  $R^{11}$ ,  $R^{12}$ ,  $R^{13}$ ,  $R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$  are independently selected from the group consisting of hydrido, acetamido, haloacetamido, amidino, guanidino, alkylenedioxy, haloalkylthio, alkanoyloxy, alkoxy, cycloalkoxy, cycloalkylalkoxy, aralkoxy, aryloxy, heteroaryloxy, heteroaralkoxy, heterocyclyloxy, heterocyclylalkoxy, alkoxyalkyl, haloalkoxylalkyl, hydroxy, amino, alkoxyamino, nitro, alkylamino, N-alkyl-N-arylamino, arylamino, aralkylamino, heteroarylamino, heteroaralkylamino, heterocyclylamino, heterocyclylalkylamino, alkylthio, alkylthioalkyl, alkylsulfinyl, arylsulfinyl, aralkylsulfinyl, cycloalkylsulfinyl, heteroarylsulfinyl,

- alkylsulfonyl, arylsulfonyl, aralkylsulfonyl, cycloalkylsulfonyl,  
heteroarylsulfonyl, alkylsulfonylalkyl, aryl, aralkyl, cycloalkyl, cycloalkylalkyl,  
heteroaryl, heterocyclyl, alkylsulfonamido, amidosulfonyl, alkanoyl,  
haloalkanoyl, alkyl, alkenyl, halo, haloalkyl, haloalkenyl, haloalkoxy,  
5 hydroxyhaloalkyl, hydroxyalkyl, aminoalkyl, haloalkoxyalkyl, carboxyalkyl,  
carboalkoxy, carboxy, carboxamido, carboxamidoalkyl, and cyano;

$R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$  are independently optionally  $Q^b$ ;

- B is optionally selected from the group consisting of hydrido,  
trialkylsilyl, C2-C8 alkyl, C3-C8 alkylenyl, C3-C8 alkenyl, C3-C8 alkynyl, and  
10 C2-C8 haloalkyl, wherein each member of group B may be optionally  
substituted at any carbon up to and including 6 atoms from the point of  
attachment of B to A with one or more of the group consisting of  $R^{32}$ ,  $R^{33}$ ,  
 $R^{34}$ ,  $R^{35}$ , and  $R^{36}$ ;

- B is optionally a C3-C12 cycloalkyl or a C4-C9 heterocyclyl, wherein  
15 each ring carbon may be optionally substituted with  $R^{33}$ , a ring carbon other  
than the ring carbon at the point of attachment of B to A may be optionally  
substituted with oxo provided that no more than one ring carbon is substituted  
by oxo at the same time, ring carbons and nitrogens adjacent to the carbon at  
the point of attachment may be optionally substituted with  $R^9$  or  $R^{13}$ , a ring  
20 carbon or nitrogen adjacent to the  $R^9$  position and two atoms from the point of  
attachment may be substituted with  $R^{10}$ , a ring carbon or nitrogen adjacent to  
the  $R^{13}$  position and two atoms from the point of attachment may be  
substituted with  $R^{12}$ , a ring carbon three atoms from the point of attachment  
and adjacent to the  $R^{10}$  position may be substituted with  $R^{11}$ , a ring carbon  
25 three atoms from the point of attachment and adjacent to the  $R^{12}$  position may  
be substituted with  $R^{33}$ , and a ring carbon four atoms from the point of

ring is optionally substituted with one or more of the group consisting of  $R^9$ ,  $R^{10}$ ,  $R^{11}$ ,  $R^{12}$ , and  $R^{13}$ ;

$R^2$  is  $Z^0$ -Q;

$Z^0$  is selected from the group consisting of a covalent single bond,

5  $W^0-(CH(R^{42}))_p$  wherein p is an integer selected from 0 through 3 and  $W^0$  is selected from the group consisting of O, S, C(O), S(O),  $N(R^{41})$ , and  $ON(R^{41})$ ,  $(CH(R^{41}))_g$ -O wherein g is an integer selected from 1 through 3,  $(CH(R^{41}))_g$ -S wherein g is an integer selected from 1 through 3 with the proviso that  $Z^0$  is directly bonded to the pyridone ring;

10  $Z^0$  is optionally  $W^{22}-(CH(R^{42}))_h$  wherein h is 0 or 1 and  $W^{22}$  is selected from the group consisting of  $CR^{41}=CR^{42}$ , 1,2-cyclopropyl, 1,2-cyclobutyl, 1,2-cyclohexyl, 1,3-cyclohexyl, 1,2-cyclopentyl, 1,3-cyclopentyl, 2,3-morpholinyl, 2,4-morpholinyl, 2,6-morpholinyl, 3,4-morpholinyl, 3,5-morpholinyl, 1,2-piperazinyl, 1,3-piperazinyl, 2,3-piperazinyl, 2,6-piperazinyl, 15 1,2-piperidinyl, 1,3-piperidinyl, 2,3-piperidinyl, 2,4-piperidinyl, 2,6-piperidinyl, 3,4-piperidinyl, 1,2-pyrrolidinyl, 1,3-pyrrolidinyl, 2,3-pyrrolidinyl, 2,4-pyrrolidinyl, 2,5-pyrrolidinyl, 3,4-pyrrolidinyl, 2,3-tetrahydrofuranyl, 2,4-tetrahydrofuranyl, 2,5-tetrahydrofuranyl, and 3,4-tetrahydrofuranyl, wherein  $Z^0$  is directly bonded to the pyridone ring and  $W^{22}$  is optionally substituted with

20 one or more substituents selected from the group consisting of  $R^9$ ,  $R^{10}$ ,  $R^{11}$ ,  $R^{12}$ , and  $R^{13}$ , with the proviso that  $W^{22}$  is selected from other than a cycloalkyl when  $Y^0$  is selected as a thiazolyl, imidazolyl, or pyridyl and any one of  $Q^b$ ,  $R^{16}$  and  $R^{19}$  is selected as hydrido, amino, aminoalkyl, hydroxyalkyl, halo, trifluoromethyl, alkyl, or alkoxy;

$R^{41}$  is selected from the group consisting of hydrido, hydroxy, and alkyl;

$R^{42}$  is selected from the group consisting of amidino, hydroxyamino, hydrido, hydroxy, amino, and alkyl;

- 5        Q is phenyl or a heteroaryl of 5 or 6 ring members, wherein a nitrogen with a removable hydrogen or a carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^9$ , a nitrogen with a removable hydrogen or a carbon at the other position adjacent to the point of attachment is optionally substituted by  $R^{13}$ , a nitrogen with a removable hydrogen or a
- 10      carbon adjacent to  $R^9$  and two atoms from the point of attachment is optionally substituted by  $R^{10}$ , a nitrogen with a removable hydrogen or a carbon adjacent to  $R^{13}$  and two atoms from the point of attachment is optionally substituted by  $R^{12}$ , and a nitrogen with a removable hydrogen or a carbon adjacent to both  $R^{10}$  and  $R^{12}$  is substituted by  $R^{11}$ , with the proviso that Q is other than phenyl
- 15      when  $Z^0$  is a covalent single bond;

Q is optionally hydrido with the proviso that  $Z^0$  is other than a covalent single bond;

K is  $(CR^{4a}R^{4b})_n$  wherein n is 1 or 2;

- $R^{4a}$  and  $R^{4b}$  are independently selected from the group consisting of
- 20      halo, hydrido, hydroxyalkyl, alkyl, alkoxyalkyl, alkylthioalkyl, and haloalkyl;
- $E^0$  is  $E^1$ , when K is  $(CR^{4a}R^{4b})_n$ , wherein  $E^1$  is selected from the group consisting of a covalent single bond, C(O), C(S), C(O)N( $R^7$ ), ( $R^7$ )NC(O), S(O)<sub>2</sub>, ( $R^7$ )NS(O)<sub>2</sub>, and S(O)<sub>2</sub>N( $R^7$ );

$Y^0$  is phenyl or a heteroaryl of 5 or 6 ring members, wherein one carbon of said phenyl or said heteroaryl is substituted by  $Q^S$ , a carbon two or three contiguous atoms from the point of attachment of  $Q^S$  is substituted by  $Q^b$ , a carbon adjacent to the point of attachment of  $Q^S$  is optionally substituted by  $R^{17}$ , another carbon adjacent to the point of attachment of  $Q^S$  is optionally substituted by  $R^{18}$ , a carbon adjacent to  $Q^b$  is optionally substituted by  $R^{16}$ , and another carbon adjacent to  $Q^b$  is optionally substituted by  $R^{19}$ ;

$R^{16}$ ,  $R^{17}$ ,  $R^{18}$ , and  $R^{19}$  are independently selected from the group consisting of hydrido, amidino, guanidino, carboxy, haloalkylthio, alkoxy, hydroxy, amino, nitro, alkoxyamino, lower alkylamino, alkylthio, alkylsulfinyl, alkylsulfonyl, alkanoyl, haloalkanoyl, alkyl, alkenyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, aminoalkyl, haloalkoxyalkyl, carboalkoxy, and cyano;

$R^{16}$  or  $R^{19}$  is optionally selected from the group consisting of  $NR^{20}R^{21}$ ,  $N(R^{26})C(NR^{25})N(R^{23})(R^{24})$ , and  $C(NR^{25})NR^{23}R^{24}$ , with the proviso that  $R^{16}$ ,  $R^{19}$ , and  $Q^b$  are not simultaneously hydrido;

$Q^b$  is selected from the group consisting of  $NR^{20}R^{21}$ , aminoalkyl, hydrido,  $N(R^{26})C(NR^{25})N(R^{23})(R^{24})$ , and  $C(NR^{25})NR^{23}R^{24}$ , with the provisos that no more than one of  $R^{20}$  and  $R^{21}$  is selected from the group consisting of hydroxy, amino, alkylamino, and dialkylamino at the same time and that no more than one of  $R^{23}$  and  $R^{24}$  is selected from the group consisting of hydroxy, amino, alkylamino, and dialkylamino at the same time;

$R^{20}$ ,  $R^{21}$ ,  $R^{23}$ ,  $R^{24}$ ,  $R^{25}$ , and  $R^{26}$  are independently selected from the group consisting of hydrido, alkyl, hydroxy, aminoalkyl, amino, dialkylamino, alkylamino, and hydroxyalkyl;

$Q^s$  is selected from the group consisting of a single covalent bond,  
 $(CR^{37}R^{38})_b$  wherein  $b$  is an integer selected from 1 through 4, and  
 $(CH(R^{14}))_c-W^1-(CH(R^{15}))_d$  wherein  $c$  and  $d$  are integers independently  
 selected from 1 through 3 and  $W^1$  is selected from the group consisting of  
 5  $C(O)N(R^{14})$ ,  $(R^{14})NC(O)$ ,  $S(O)$ ,  $S(O)_2$ ,  $S(O)_2N(R^{14})$ ,  $N(R^{14})S(O)_2$ , and  
 $N(R^{14})$ , with the provisos that  $R^{14}$  is selected from other than halo when  
 directly bonded to N and that  $(CR^{37}R^{38})_b$  and  $(CH(R^{14}))_c$  are bonded to  $E^0$ ;

$R^{14}$  is selected from the group consisting of hydrido, halo, alkyl, and  
 haloalkyl;

10  $R^{37}$  and  $R^{38}$  are independently selected from the group consisting of  
 hydrido, alkyl, and haloalkyl;

$R^{38}$  is optionally aroyl or heteroaroyl, wherein  $R^{38}$  is optionally  
 substituted at from one through three of the ring carbons with a substituent  
 selected from the group consisting of  $R^{16}$ ,  $R^{17}$ ,  $R^{18}$ , and  $R^{19}$ ;

15  $Y^0$  is optionally  $Y^{AT}$  wherein  $Y^{AT}$  is  $Q^b-Q^s$ ;

$Y^0$  is optionally  $Q^b-Q^{ss}$  wherein  $Q^{ss}$  is  $(CH(R^{14}))_e-W^2-(CH(R^{15}))_h$ ,

wherein  $e$  and  $h$  are independently 1 or 2 and  $W^2$  is  $CR^{4a}=CR^{4b}$  with the  
 proviso that  $(CH(R^{14}))_e$  is bonded to  $E^0$ ;

$Y^0$  is optionally selected from the group consisting of  $Q^b-Q^{ssss}$  and  $Q^b-Q^{sssr}$

20 wherein  $Q^{ssss}$  is  $(CH(R^{38}))_r-W^5$  and  $Q^{sssr}$  is  $(CH(R^{38}))_r-W^6$ ,  $r$  is 1 or 2,  
 and  $W^5$  and  $W^6$  are independently selected from the group consisting of 1,4-  
 indenyl, 1,5-indenyl, 1,6-indenyl, 1,7-indenyl, 2,7-indenyl, 2,6-indenyl, 2,5-  
 indenyl, 2,4-indenyl, 3,4-indenyl, 3,5-indenyl, 3,6-indenyl, 3,7-indenyl, 2,4-  
 benzofuranyl, 2,5-benzofuranyl, 2,6-benzofuranyl, 2,7-benzofuranyl, 3,4-

- benzofuranyl, 3,5-benzofuranyl, 3,6-benzofuranyl, 3,7-benzofuranyl, 2,4-benzothiophenyl, 2,5-benzothiophenyl, 2,6-benzothiophenyl, 2,7-benzothiophenyl, 3,4-benzothiophenyl, 3,5-benzothiophenyl, 3,6-benzothiophenyl, 3,7-benzothiophenyl, 2,7-imidazo(1,2-a)pyridinyl, 3,4-imidazo(1,2-a)pyridinyl, 3,5-imidazo(1,2-a)pyridinyl, 3,6-imidazo(1,2-a)pyridinyl, 3,7-imidazo(1,2-a)pyridinyl, 2,4-indolyl, 2,5-indolyl, 2,6-indolyl, 2,7-indolyl, 3,4-indolyl, 3,5-indolyl, 3,6-indolyl, 3,7-indolyl, 1,4-isoindolyl, 1,5-isoindolyl, 1,6-isoindolyl, 2,4-isoindolyl, 2,5-isoindolyl, 2,6-isoindolyl, 2,7-isoindolyl, 1,3-isoindolyl, 3,4-indazolyl, 3,5-indazolyl, 3,6-indazolyl, 3,7-indazolyl, 2,4-benzoxazolyl, 2,5-benzoxazolyl, 2,6-benzoxazolyl, 2,7-benzoxazolyl, 3,4-benzisoxazolyl, 3,5-benzisoxazolyl, 3,6-benzisoxazolyl, 3,7-benzisoxazolyl, 1,4-naphthyl, 1,5-naphthyl, 1,6-naphthyl, 1,7-naphthyl, 1,8-naphthyl, 2,4-naphthyl, 2,5-naphthyl, 2,6-naphthyl, 2,7-naphthyl, 2,8-naphthyl, 2,4-quinolinyl, 2,5-quinolinyl, 2,6-quinolinyl, 2,7-quinolinyl, 2,8-quinolinyl, 3,4-quinolinyl, 3,5-quinolinyl, 3,6-quinolinyl, 3,7-quinolinyl, 3,8-quinolinyl, 4,5-quinolinyl, 4,6-quinolinyl, 4,7-quinolinyl, 4,8-quinolinyl, 1,4-isoquinolinyl, 1,5-isoquinolinyl, 1,6-isoquinolinyl, 1,7-isoquinolinyl, 1,8-isoquinolinyl, 3,4-isoquinolinyl, 3,5-isoquinolinyl, 3,6-isoquinolinyl, 3,7-isoquinolinyl, 3,8-isoquinolinyl, 4,5-isoquinolinyl, 4,6-isoquinolinyl, 4,7-isoquinolinyl, 4,8-isoquinolinyl, 3,4-cinnolinyl, 3,5-cinnolinyl, 3,6-cinnolinyl, 3,7-cinnolinyl, 3,8-cinnolinyl, 4,5-cinnolinyl, 4,6-cinnolinyl, 4,7-cinnolinyl, and 4,8-cinnolinyl, and each carbon and hyrido containing nitrogen member of the ring of the  $W^5$  and of the ring of the  $W^6$ , other than the points of attachment of  $W^5$  and  $W^6$ , is optionally substituted with one or more of the group consisting of  $R^9$ ,  $R^{10}$ ,  $R^{11}$ , and  $R^{12}$ , with the provisos that  $W^5$  and  $W^6$  are selected from other than 2,4-benzofuranyl, 2,5-benzofuranyl, 2,6-benzofuranyl, 2,7-benzofuranyl, 3,4-benzofuranyl, 3,5-benzofuranyl, 3,6-benzofuranyl, 3,7-benzofuranyl, 2,4-indolyl, 2,5-indolyl, 2,6-indolyl, 2,7-indolyl, 3,4-indolyl, 3,5-indolyl, 3,6-indolyl, 3,7-indolyl, 1,4-isoindolyl, 1,5-isoindolyl, 1,6-isoindolyl, 2,4-isoindolyl, 2,5-isoindolyl, 2,6-isoindolyl, 2,7-isoindolyl, 1,3-isoindolyl, 3,4-indazolyl, 3,5-indazolyl, 3,6-indazolyl, 3,7-indazolyl, 2,4-benzoxazolyl, 2,5-benzoxazolyl, 2,6-benzoxazolyl, 2,7-benzoxazolyl, 3,4-benzisoxazolyl, 3,5-benzisoxazolyl, 3,6-



optionally substituted with  $R^{12}$ , a ring carbon three atoms from the point of attachment and adjacent to the  $R^{10}$  position is optionally substituted with  $R^{11}$ , a ring carbon three atoms from the point of attachment and adjacent to the  $R^{12}$  position is optionally substituted with  $R^{33}$ , and a ring carbon four atoms from the point of attachment and adjacent to the  $R^{11}$  and  $R^{33}$  positions is optionally substituted with  $R^{34}$ ;

B is optionally, with the proviso that  $R^1$  and  $R^2$  are selected from the group consisting of a spacer pair and  $-W=X-Y=Z-$ , a C5-C9 saturated heterocyclyl, wherein each ring carbon is optionally substituted with  $R^{33}$ , a ring carbon other than the ring carbon at the point of attachment of B to A is optionally substituted with oxo provided that no more than one ring carbon is substituted by oxo at the same time, ring carbons and nitrogen adjacent to the carbon atom at the point of attachment are optionally substituted with  $R^9$  or  $R^{13}$ , a ring carbon or nitrogen adjacent to the  $R^9$  position and two atoms from the point of attachment is optionally substituted with  $R^{10}$ , a ring carbon or nitrogen adjacent to the  $R^{13}$  position and two atoms from the point of attachment is optionally substituted with  $R^{12}$ , a ring carbon or nitrogen three atoms from the point of attachment and adjacent to the  $R^{10}$  position is optionally substituted with  $R^{11}$ , a ring carbon or nitrogen three atoms from the point of attachment and adjacent to the  $R^{12}$  position is optionally substituted with  $R^{33}$ , and a ring carbon or nitrogen four atoms from the point of attachment and adjacent to the  $R^{11}$  and  $R^{33}$  positions is optionally substituted with  $R^{34}$ ;

- $R^9, R^{10}, R^{11}, R^{12}$ , and  $R^{13}$  are independently selected from the group consisting of hydrido, acetamido, haloacetamido, alkoxyamino, alkanoyl, haloalkanoyl, amidino, guanidino, alkylenedioxy, haloalkylthio, alkoxy, hydroxy, amino, alkylamino, alkylthio, alkylsulfinyl, alkylsulfonyl,
- 5 alkylsulfonamido, amidosulfonyl, monoalkyl amidosulfonyl, dialkyl amidosulfonyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, aminoalkyl, carboalkoxy, carboxyalkyl, carboxy, carboxamido, and cyano;

- $R^9, R^{10}, R^{11}, R^{12}$ , and  $R^{13}$  are optionally selected from the group consisting of heteroaryl and heterocyclyl with the proviso that  $R^9, R^{10}, R^{11},$
- 10  $R^{12}$ , and  $R^{13}$  are substituents for other than B;

A is selected from the group consisting of single covalent bond and  $(CH(R^{15}))_{pa}-(W^7)_{rr}$  wherein  $rr$  is an integer selected from 0 through 1,  $pa$  is an integer selected from 0 through 3, and  $W^7$  is selected from the group consisting of O, S, C(O),  $(R^7)NC(O)$ ,  $(R^7)NC(S)$ , and  $N(R^7)$ ;

- 15  $R^7$  is selected from the group consisting of hydrido, hydroxy and alkyl;
- $R^{15}$  is selected from the group consisting of hydrido, hydroxy, halo, alkyl, and haloalkyl;

$\Psi$  is NH;

- $R^1$  and  $X^0$  are independently selected from the group consisting of
- 20 hydrido, alkyl, cyano, halo, haloalkyl, haloalkoxy, amino, aminoalkyl, alkylamino, amidino, hydroxy, hydroxyamino, alkoxy, hydroxyalkyl, alkoxyamino, thiol, and alkylthio;

- $R^1$  and  $R^2$  is optionally selected to be  $-W=X-Y=Z-$  wherein  $-W=X-Y=Z-$  forms a ring selected from the group consisting of a heteroaryl ring
- 25 having from 5 through 6 members and an aryl;

W, X, Y, and Z are independently selected from the group consisting of  $C(R^9)$ ,  $C(R^{10})$ ,  $C(R^{11})$ ,  $C(R^{12})$ , N,  $N(R^{10})$ , O, S and a covalent bond with the provisos that W, X, Y, and Z can be independently selected to be a covalent

bond when one of W, X, Y, and Z is selected from the group consisting of N, N(R<sup>10</sup>), O, and S, no more than one of W, X, Y, and Z can be selected from the group consisting of O and S, and no more than three of W, X, Y, and Z can be selected from the group consisting of N and N(R<sup>10</sup>);

- 5           R<sup>1</sup> and R<sup>2</sup> spacer pairs are independently optionally selected to be taken together to form a spacer pair wherein the spacer pair forms a linear moiety having from 3 through 6 atoms connecting the points of bonding of said spacer pair members to form a ring selected from the group consisting of a cycloalkenyl ring having from 5 through 8 members and a partially saturated  
10 heterocyclyl ring having from 5 through 8 members, wherein said spacer pair is optionally substituted with one or more of the group consisting of R<sup>9</sup>, R<sup>10</sup>, R<sup>11</sup>, R<sup>12</sup>, and R<sup>13</sup>;

R<sup>2</sup> is Z<sup>0</sup>-Q;

- Z<sup>0</sup> is selected from the group consisting of covalent single bond and  
15 (CR<sup>41</sup>R<sup>42</sup>)<sub>q</sub> wherein q is an integer selected from 1 through 2, (CH(R<sup>41</sup>))<sub>g</sub>-W<sup>0</sup>-(CH(R<sup>42</sup>))<sub>p</sub> wherein g and p are integers independently selected from 0 through 3 and W<sup>0</sup> is selected from the group consisting of O, S, and N(R<sup>41</sup>), and (CH(R<sup>41</sup>))<sub>e</sub>-W<sup>22</sup>-(CH(R<sup>42</sup>))<sub>h</sub> wherein e and h are integers independently selected from 0 through 1 and W<sup>22</sup> is selected from the group consisting of  
20 CR<sup>41</sup>=CR<sup>42</sup>, 1,2-cyclopropyl, 1,2-cyclobutyl, 1,2-cyclohexyl, 1,3-cyclohexyl, 1,2-cyclopentyl, 1,3-cyclopentyl, 2,3-morpholinyl, 2,4-morpholinyl, 2,6-morpholinyl, 3,4-morpholinyl, 3,5-morpholinyl, 1,2-piperazinyl, 1,3-piperazinyl, 2,3-piperazinyl, 2,6-piperazinyl, 1,2-piperidinyl, 1,3-piperidinyl, 2,3-piperidinyl, 2,4-piperidinyl, 2,6-piperidinyl, 3,4-piperidinyl, 1,2-pyrrolidinyl, 1,3-  
25 pyrrolidinyl, 2,3-pyrrolidinyl, 2,4-pyrrolidinyl, 2,5-pyrrolidinyl, 3,4-pyrrolidinyl, 2,3-tetrahydrofuranyl, 2,4-tetrahydrofuranyl, 2,5-tetrahydrofuranyl, and 3,4-

tetrahydrofuranyl, with the proviso that  $Z^0$  is directly bonded to the pyridone ring;

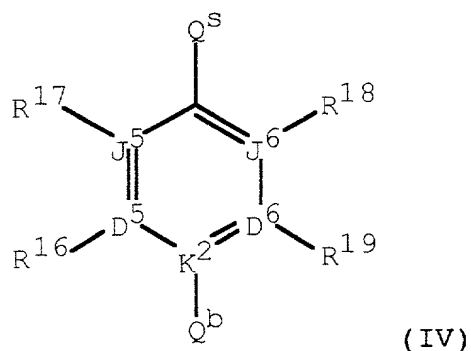
$R^{41}$  and  $R^{42}$  are independently selected from the group consisting of hydrido, hydroxy, and amino;

- 5         $Q$  is selected from the group consisting of hydrido, with the proviso that  $Z^0$  is other than a covalent single bond, aryl, and heteroaryl, wherein a carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^9$ , the other carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^{13}$ , a carbon adjacent to  $R^9$  and two atoms from the carbon at
- 10      the point of attachment is optionally substituted by  $R^{10}$ , a carbon adjacent to  $R^{13}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{12}$ , and any carbon adjacent to both  $R^{10}$  and  $R^{12}$  is optionally substituted by  $R^{11}$ ;

- 15         $K$  is  $CHR^{4a}$  wherein  $R^{4a}$  is selected from the group consisting of hydrido, hydroxyalkyl, alkyl, alkoxyalkyl, alkylthioalkyl, and haloalkyl;

$E^0$  is selected from the group consisting of a covalent single bond,  $C(O)N(H)$ ,  $(H)NC(O)$ ,  $(R^7)NS(O)_2$ , and  $S(O)_2N(R^7)$ ;

$Y^0$  is formula (IV):



- wherein  $D^5$ ,  $D^6$ ,  $J^5$ , and  $J^6$  are independently selected from the group consisting of C, N, O, S and a covalent bond with the provisos that no more than one is a covalent bond,  $K^2$  is C, no more than one of  $D^5$ ,  $D^6$ ,  $J^5$ , and  $J^6$  is O, no more than one of  $D^5$ ,  $D^6$ ,  $J^5$ , and  $J^6$  is S, one of  $D^5$ ,  $D^6$ ,  $J^5$ , and  $J^6$  must be a covalent bond when two of  $D^5$ ,  $D^6$ ,  $J^5$ , and  $J^6$  are O and S, and no more than four of  $D^5$ ,  $D^6$ ,  $J^5$ , and  $J^6$  are N, with the provisos that  $R^{16}$ ,  $R^{17}$ ,  $R^{18}$ , and  $R^{19}$  are each independently selected to maintain the tetravalent nature of carbon, trivalent nature of nitrogen, the divalent nature of sulfur, and the divalent nature of oxygen;
- $R^{16}$ ,  $R^{17}$ ,  $R^{18}$ , and  $R^{19}$  are independently selected from the group consisting of hydrido, amidino, guanidino, carboxy, haloalkylthio, alkoxy, hydroxy, amino, alkoxyamino, alkylamino, alkylthio, alkylsulfinyl, alkylsulfonyl, alkanoyl, haloalkanoyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, aminoalkyl, and cyano;
- $R^{16}$  and  $R^{19}$  are optionally  $Q^b$  with the proviso that no more than one of  $R^{16}$  and  $R^{19}$  is  $Q^b$  at the same time and that  $Q^b$  is  $Q^{be}$ ;
- $Q^b$  is selected from the group consisting of  $NR^{20}R^{21}$ ,  $Q^{be}$  wherein  $Q^{be}$  is hydrido,  $N(R^{26})C(NR^{25})N(R^{23})(R^{24})$ , and  $C(NR^{25})NR^{23}R^{24}$ , with the provisos that no more than one of  $R^{20}$  and  $R^{21}$  is hydroxy, amino, alkylamino, or dialkylamino at the same time and that no more than one of  $R^{23}$  and  $R^{24}$  is hydroxy, amino, alkylamino, or dialkylamino at the same time;
- $R^{20}$ ,  $R^{21}$ ,  $R^{23}$ ,  $R^{24}$ ,  $R^{25}$ , and  $R^{26}$  are independently selected from the group consisting of hydrido, alkyl, hydroxy, amino, alkylamino and dialkylamino;
- $Q^s$  is selected from the group consisting of a single covalent bond,  $(CR^{37}R^{38})_b$  wherein b is an integer selected from 1 through 4, and

- $(\text{CH}(\text{R}^{14}))_c\text{-W}^1\text{-(CH}(\text{R}^{15}))_d$  wherein c and d are integers independently selected from 1 through 3 and  $\text{W}^1$  is selected from the group consisting of  $\text{C}(\text{O})\text{N}(\text{R}^{14})$ ,  $(\text{R}^{14})\text{NC}(\text{O})$ ,  $\text{S}(\text{O})$ ,  $\text{S}(\text{O})_2$ ,  $\text{S}(\text{O})_2\text{N}(\text{R}^{14})$ ,  $\text{N}(\text{R}^{14})\text{S}(\text{O})_2$ , and  $\text{N}(\text{R}^{14})$ , with the provisos that  $\text{R}^{14}$  is selected from other than halo when
- 5 directly bonded to N and that  $(\text{CR}^{37}\text{R}^{38})_b$ , and  $(\text{CH}(\text{R}^{14}))_c$  are bonded to  $\text{E}^0$ ;
- $\text{R}^{14}$  is selected from the group consisting of hydrido, halo, alkyl, and haloalkyl;
- $\text{R}^{37}$  and  $\text{R}^{38}$  are independently selected from the group consisting of hydrido, alkyl, and haloalkyl;
- 10  $\text{R}^{38}$  is optionally selected from the group consisting of aroyl and heteroaroyl;
- $\text{Y}^0$  is optionally  $\text{Q}^b\text{-Q}^{\text{ss}}$  wherein  $\text{Q}^{\text{ss}}$  is  $(\text{CH}(\text{R}^{14}))_e\text{-W}^2\text{-(CH}(\text{R}^{15}))_h$ , wherein e and h are integers independently selected from 1 through 2 and  $\text{W}^2$  is  $\text{CR}^{4a}=\text{CH}$  with the proviso that  $(\text{CH}(\text{R}^{14}))_e$  is bonded to  $\text{E}^0$ .
- 15 In another more preferred embodiment of compounds of Formula I or a pharmaceutically acceptable salt thereof,
- J is O;
- B is phenyl or a heteroaryl of 5 or 6 ring members, wherein a carbon adjacent to the carbon at the point of attachment is optionally substituted by
- 20  $\text{R}^{32}$ , the other carbon adjacent to the carbon at the point of attachment is optionally substituted by  $\text{R}^{36}$ , a carbon adjacent to  $\text{R}^{32}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $\text{R}^{33}$ , a carbon adjacent to  $\text{R}^{36}$  and two atoms from the carbon at the point of attachment is

optionally substituted by  $R^{35}$ , and any carbon adjacent to both  $R^{33}$  and  $R^{35}$  is substituted by  $R^{34}$ ;

$R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$  are independently selected from the

- group consisting of hydrido, acetamido, haloacetamido, amidino, guanidino,  
 5 alkylenedioxy, haloalkylthio, alkanoyloxy, alkoxy, hydroxy, amino,  
 alkoxyamino, haloalkanoyl, nitro, lower alkylamino, alkylthio, aryl, aralkyl,  
 cycloalkyl, cycloalkylalkyl, heteroaryl, heterocyclyl, alkylsulfonamido,  
 amidosulfonyl, monoalkyl amidosulfonyl, dialkyl amidosulfonyl, alkyl, alkenyl,  
 halo, haloalkyl, haloalkenyl, haloalkoxy, hydroxyalkyl, hydroxyhaloalkyl,  
 10 aminoalkyl, carboalkoxy, carboxy, carboxamido, cyano, and  $Q^b$ ;

- B is optionally selected from the group consisting of hydrido,  
 trialkylsilyl, C2-C8 alkyl, C3-C8 alkylenyl, C3-C8 alkenyl, C3-C8 alkynyl, and  
 C2-C8 haloalkyl, wherein each member of group B is optionally substituted at  
 any carbon up to and including 6 atoms from the point of attachment of B to A  
 15 with one or more of the group consisting of  $R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$ ;

- B is optionally a C3-C12 cycloalkyl or C4-C9 heterocyclyl, wherein  
 each ring carbon may be optionally substituted with  $R^{33}$ , a ring carbon other  
 than the ring carbon at the point of attachment of B to A may be optionally  
 substituted with oxo provided that no more than one ring carbon is substituted  
 20 by oxo at the same time, ring carbons and nitrogens adjacent to the carbon at  
 the point of attachment may be optionally substituted with  $R^9$  or  $R^{13}$ , a ring  
 carbon or nitrogen adjacent to the  $R^9$  position and two atoms from the point of  
 attachment may be substituted with  $R^{10}$ , a ring carbon or nitrogen adjacent to  
 the  $R^{13}$  position and two atoms from the point of attachment may be  
 25 substituted with  $R^{12}$ , a ring carbon three atoms from the point of attachment  
 and adjacent to the  $R^{10}$  position may be substituted with  $R^{11}$ , a ring carbon  
 three atoms from the point of attachment and adjacent to the  $R^{12}$  position may

be substituted with  $R^{33}$ , and a ring carbon four atoms from the point of attachment and adjacent to the  $R^{11}$  and  $R^{33}$  positions may be substituted with  $R^{34}$ ;

$R^9, R^{10}, R^{11}, R^{12}$ , and  $R^{13}$  are independently selected from the group

- 5 consisting of hydrido, acetamido, haloacetamido, alkoxyamino, alkanoyl, haloalkanoyl, amidino, guanidino, alkylenedioxy, haloalkylthio, alkoxy, cycloalkoxy, cycloalkylalkoxy, aralkoxy, aryloxy, heteroaryloxy, heteroaralkoxy, heterocyclyloxy, heterocyclylalkoxy, hydroxy, amino, alkylamino, N-alkyl-N-aryl amino, arylamino, aralkylamino, heteroaryl amino, 10 heteroaralkyl amino, heterocyclylamino, heterocyclylalkyl amino, alkylthio, alkylsulfinyl, arylsulfinyl, aralkylsulfinyl, cycloalkylsulfinyl, heteroaryl sulfinyl, alkylsulfamido, alkylsulfonyl, arylsulfonyl, aralkylsulfonyl, cycloalkylsulfonyl, heteroaryl sulfonyl, amidosulfonyl, alkyl, aryl, aralkyl, cycloalkyl, cycloalkylalkyl, heteroaryl, heterocyclyl, halo, haloalkyl, haloalkoxy, 15 hydroxyalkyl, hydroxyhaloalkyl, aminoalkyl, carboalkoxy, carboxy, carboxyalkyl, carboxamido, and cyano;

A is a single covalent bond or  $(CH(R^{15}))_{pa}-(W^7)_{rr}$  wherein  $rr$  is 0 or 1,  $pa$  is an integer selected from 0 through 3, and  $W^7$  is selected from the group consisting of O, S, C(O),  $(R^7)NC(O)$ ,  $(R^7)NC(S)$ , and  $N(R^7)$ ;

- 20  $R^7$  is selected from the group consisting of hydrido, hydroxy and alkyl;

$R^{15}$  is selected from the group consisting of hydrido, hydroxy, halo, alkyl, and haloalkyl;

$\Psi$  is NH;

$R^1$  and  $X^0$  are independently selected from the group consisting of

- 25 hydrido, alkyl, cyano, halo, haloalkyl, haloalkoxy, amino, aminoalkyl, alkylamino, amidino, hydroxy, hydroxyamino, alkoxy, hydroxyalkyl, alkoxyamino, thiol, and alkylthio;



$X^0$  and  $R^1$  or  $R^1$  and  $R^2$  is optionally  $-W=X-Y=Z-$  wherein  $-W=X-Y=Z-$  forms an aryl or heteroaryl of 5 or 6 ring-members;

W, X, Y, and Z are independently selected from the group consisting of  $C(R^9)$ ,  $C(R^{10})$ ,  $C(R^{11})$ ,  $C(R^{12})$ , N,  $N(R^{10})$ , O, S and a covalent bond with the

- 5 provisos that one of W, X, Y, and Z is independently selected to be a covalent bond when one of W, X, Y, and Z is O or S, no more than one of W, X, Y, and Z is optionally selected from the group consisting of O and S, and no more than three of W, X, Y, and Z are optionally selected from the group consisting of N and  $N(R^{10})$ ;

- 10  $X^0$  and  $R^1$  or  $R^1$  and  $R^2$  is optionally bonded together to form C5-C8 cycloalkenyl ring or a partially saturated C5-C8 heterocyclyl ring, wherein said ring is optionally substituted with one or more of the group consisting of  $R^9$ ,  $R^{10}$ ,  $R^{11}$ ,  $R^{12}$ , and  $R^{13}$ ;

$R^2$  is  $Z^0-Q$ ;

- 15  $Z^0$  is selected from the group consisting of a covalent single bond,  $W^0-(CH(R^{42}))_p$  wherein p is an integer selected from 0 through 3 and  $W^0$  is selected from the group consisting of O, S, and  $N(R^{41})$ , and  $(CH(R^{41}))_g-O$  wherein g is an integer selected from 1 through 3, with the proviso that  $Z^0$  is directly bonded to the pyridone ring;

- 20  $Z^0$  is optionally  $W^{22}-(CH(R^{42}))_h$  wherein h is 0 or 1 and  $W^{22}$  is selected from the group consisting of 1,2-cyclopropyl, 1,2-cyclobutyl, 1,2-cyclohexyl, 1,3-cyclohexyl, 1,2-cyclopentyl, 1,3-cyclopentyl, 2,3-morpholinyl, 2,4-morpholinyl, 2,6-morpholinyl, 3,4-morpholinyl, 3,5-morpholinyl, 1,2-piperazinyl, 1,3-piperazinyl, 2,3-piperazinyl, 2,6-piperazinyl, 1,2-piperidinyl, 1,3-piperidinyl, 2,3-piperidinyl, 2,4-piperidinyl, 2,6-piperidinyl, 3,4-piperidinyl, 1,2-pyrrolidinyl, 1,3-pyrrolidinyl, 2,3-pyrrolidinyl, 2,4-pyrrolidinyl, 2,5-pyrrolidinyl, 3,4-pyrrolidinyl, 2,3-tetrahydrofuranyl, 2,4-tetrahydrofuranyl, 2,5-tetrahydrofuranyl, and 3,4-tetrahydrofuranyl, wherein  $Z^0$  is directly bonded to

the pyridone ring and  $W^{22}$  is optionally substituted with one or more substituents selected from the group consisting of  $R^9$ ,  $R^{10}$ ,  $R^{11}$ ,  $R^{12}$ , and  $R^{13}$ , with the proviso that  $W^{22}$  is selected from other than a cycloalkyl when  $Y^0$  is selected as a thiazolyl, imidazolyl, or pyridyl and any one of  $Q^b$ ,  $R^{16}$  and  $R^{19}$  is selected as hydrido, amino, aminoalkyl, hydroxyalkyl, halo, trifluoromethyl, alkyl, or alkoxy;

$R^{41}$  is selected from the group consisting of hydrido, hydroxy, and alkyl;

$R^{42}$  is selected from the group consisting of amidino, hydroxyamino, hydrido, hydroxy, amino, and alkyl;

Q is phenyl or a heteroaryl of 5 or 6 ring members, wherein a carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^9$ , the other carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^{13}$ , a carbon adjacent to  $R^9$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{10}$ , a carbon adjacent to  $R^{13}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{12}$ , and any carbon adjacent to both  $R^{10}$  and  $R^{12}$  is optionally substituted by  $R^{11}$ , with the proviso that Q is other than a phenyl when  $Z^0$  is a covalent single bond;

Q is optionally hydrido with the proviso that  $Z^0$  is selected from other than a covalent single bond;

K is  $CHR^{4a}$  wherein  $R^{4a}$  is selected from the group consisting of hydrido, hydroxyalkyl, alkyl, alkoxyalkyl, alkylthioalkyl, and haloalkyl;

$E^0$  is selected from the group consisting of a covalent single bond,

$C(O)N(H)$ ,  $(H)NC(O)$ ,  $(R^7)NS(O)_2$ , and  $S(O)_2N(R^7)$ ;

$Y^0$  is phenyl or a heteroaryl of 5 or 6 ring members, wherein one carbon of said phenyl or said heteroaryl is substituted by  $Q^s$ , a carbon two or three contiguous atoms from the point of attachment of  $Q^s$  is substituted by  $Q^b$ , a carbon adjacent to the point of attachment of  $Q^s$  is optionally substituted by  $R^{17}$ , another carbon adjacent to the point of attachment of  $Q^s$  is optionally substituted by  $R^{18}$ , a carbon adjacent to  $Q^b$  is optionally substituted by  $R^{16}$ , and another carbon adjacent to  $Q^b$  is optionally substituted by  $R^{19}$ ;

$R^{16}$ ,  $R^{17}$ ,  $R^{18}$ , and  $R^{19}$  are independently selected from the group consisting of hydrido, amidino, guanidino, carboxy, haloalkylthio, alkoxy, hydroxy, amino, alkoxyamino, lower alkylamino, alkylthio, alkylsulfinyl, alkylsulfonyl, alkanoyl, haloalkanoyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, aminoalkyl, and cyano;

$R^{16}$  or  $R^{19}$  is optionally selected from the group consisting of  $NR^{20}R^{21}$ ,  $N(R^{26})C(NR^{25})N(R^{23})(R^{24})$ , and  $C(NR^{25})NR^{23}R^{24}$ , with the proviso that  $R^{16}$ ,  $R^{19}$ , and  $Q^b$  are not simultaneously hydrido;

$Q^b$  is selected from the group consisting of  $NR^{20}R^{21}$ ,  $Q^{be}$  wherein  $Q^{be}$  is hydrido,  $N(R^{26})C(NR^{25})N(R^{23})(R^{24})$ , and  $C(NR^{25})NR^{23}R^{24}$ , with the provisos that no more than one of  $R^{20}$  and  $R^{21}$  is selected from the group consisting of hydroxy, amino, alkylamino, and dialkylamino at the same time and that no more than one of  $R^{23}$  and  $R^{24}$  is selected from the group consisting of hydroxy, amino, alkylamino, and dialkylamino at the same time;

$R^{20}$ ,  $R^{21}$ ,  $R^{23}$ ,  $R^{24}$ ,  $R^{25}$ , and  $R^{26}$  are independently selected from the group consisting of hydrido, alkyl, hydroxy, amino, alkylamino and dialkylamino;

$Q^s$  is selected from the group consisting of a single covalent bond,  
 $(CR^{37}R^{38})_b$  wherein b is an integer selected from 1 through 4, and  
 $(CH(R^{14}))_c-W^1-(CH(R^{15}))_d$  wherein c and d are integers independently  
 selected from 1 through 3 and  $W^1$  is selected from the group consisting of  
 5  $C(O)N(R^{14})$ ,  $(R^{14})NC(O)$ ,  $S(O)$ ,  $S(O)_2$ ,  $S(O)_2N(R^{14})$ ,  $N(R^{14})S(O)_2$ , and  
 $N(R^{14})$ , with the provisos that  $R^{14}$  is selected from other than halo when  
 directly bonded to N and that  $(CR^{37}R^{38})_b$  and  $(CH(R^{14}))_c$  are bonded to  $E^0$ ;

$R^{14}$  is selected from the group consisting of hydrido, halo, alkyl, and  
 haloalkyl;  
 10  $R^{37}$  and  $R^{38}$  are independently selected from the group consisting of  
 hydrido, alkyl, and haloalkyl;

$R^{38}$  is optionally aroyl or heteroaroyl, wherein  $R^{38}$  is optionally  
 substituted at from one through three of the ring carbons with a substituent  
 selected from the group consisting of  $R^{16}$ ,  $R^{17}$ ,  $R^{18}$ , and  $R^{19}$ ;

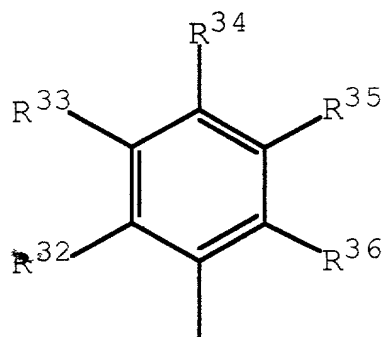
15  $Y^0$  is optionally  $Y^{AT}$  wherein  $Y^{AT}$  is  $Q^b-Q^s$ ;

$Y^0$  is optionally  $Q^b-Q^{ss}$  wherein  $Q^{ss}$  is  $(CH(R^{14}))_e-W^2-(CH(R^{15}))_h$ ,  
 wherein e and h are independently 1 or 2 and  $W^2$  is  $CR^{4a}=CH$  with the proviso  
 that  $(CH(R^{14}))_e$  is bonded to  $E^0$ .

20 In an even more preferred embodiment of compounds of Formula I or a  
 pharmaceutically acceptable salt thereof,  
 J is O;

25

B is the Formula:



$R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$  are independently selected from the

- 5 group consisting of hydrido, acetamido, haloacetamido, amidino, guanidino, alkoxy, hydroxy, amino, alkoxyamino, alkylamino, alkylthio, amidosulfonyl, monoalkyl amidosulfonyl, dialkyl amidosulfonyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, carboalkoxy, carboxy, carboxamido, cyano, and  $Q^b$ ;

A is selected from the group consisting of single covalent bond and  $(CH(R^{15}))_{pa}-(W^7)_{rr}$  wherein  $rr$  is an integer selected from 0 through 1,  $pa$  is

- 10 an integer selected from 0 through 3, and  $W^7$  is selected from the group consisting of  $(R^7)NC(O)$  and  $N(R^7)$ ;

$R^7$  is selected from the group consisting of hydrido, hydroxy and alkyl;

$R^{15}$  is selected from the group consisting of hydrido, halo, alkyl, and haloalkyl;

- 15  $\Psi$  is NH;

$R^1$  and  $X^0$  are independently selected from the group consisting of hydrido, hydroxy, hydroxyamino, amidino, amino, cyano, hydroxyalkyl, alkoxy, alkyl, alkylamino, aminoalkyl, alkylthio, alkoxyamino, haloalkyl, haloalkoxy, and halo;

- 20  $R^2$  is  $Z^0-Q$ ;

$Z^0$  is selected from the group consisting of a covalent single bond, O, S, NH, and  $CH_2$ ;

Q is selected from the group consisting of aryl and heteroaryl wherein a carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^9$ , the other carbon adjacent to the carbon at the point of attachment is

optionally substituted by  $R^{13}$ , a carbon adjacent to  $R^9$  and two atoms from the

5 carbon at the point of attachment is optionally substituted by  $R^{10}$ , a carbon

adjacent to  $R^{13}$  and two atoms from the carbon at the point of attachment is

optionally substituted by  $R^{12}$ , and any carbon adjacent to both  $R^{10}$  and  $R^{12}$  is

optionally substituted by  $R^{11}$ ;

$R^9$ ,  $R^{11}$ , and  $R^{13}$  are independently selected from the group consisting

10 of hydrido, hydroxy, amino, amidino, guanidino, alkylamino, alkylthio, alkylsulfonamido, alkylsulfinyl, alkylsulfonyl, amidosulfonyl, monoalkyl amidosulfonyl, alkyl, alkoxy, halo, haloalkyl, haloalkoxy, hydroxyalkyl, carboxy, carboxamido, and cyano;

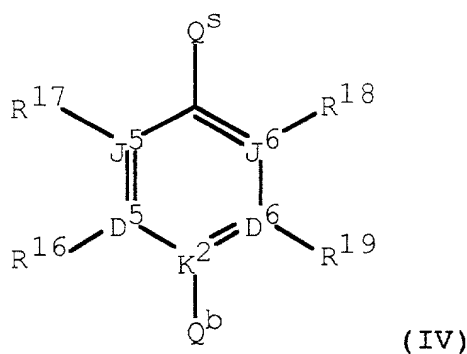
$R^{10}$  and  $R^{12}$  are independently selected from the group consisting of

15 hydrido, acetamido, haloacetamido, amidino, guanidino, alkyl, alkoxy, hydroxy, amino, alkoxyamino, alkylamino, alkylsulfonamido, amidosulfonyl, monoalkyl amidosulfonyl, dialkyl amidosulfonyl, hydroxyalkyl, aminoalkyl, carboalkoxy, carboxy, carboxyalkyl, carboxamido, halo, haloalkyl, and cyano;

K is  $CH_2$ ;

20  $E^0$  is  $C(O)N(H)$ ;

$Y^0$  is formula (IV):



wherein  $D^5$ ,  $D^6$ ,  $J^5$ , and  $J^6$  are independently selected from the group consisting of C, N, O, S and a covalent bond with the provisos that no more than one is a covalent bond,  $K^2$  is C, no more than one of  $D^5$ ,  $D^6$ ,  $J^5$ , and  $J^6$  is optionally O, no more than one of  $D^5$ ,  $D^6$ ,  $J^5$ , and  $J^6$  is optionally S, one of  $D^5$ ,  $D^6$ ,  $J^5$ , and  $J^6$  must be a covalent bond when two of  $D^5$ ,  $D^6$ ,  $J^5$ , and  $J^6$  are O and S, and no more than four of  $D^5$ ,  $D^6$ ,  $J^5$ , and  $J^6$  are N;

$R^{16}$ ,  $R^{17}$ ,  $R^{18}$ , and  $R^{19}$  are independently selected from the group consisting of hydrido, amidino, guanidino, carboxy, haloalkylthio, alkoxy, hydroxy, amino, alkylamino, alkylthio, alkylsulfinyl, alkylsulfonyl, alkanoyl, haloalkanoyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, aminoalkyl, and cyano;

$R^{16}$  and  $R^{19}$  are optionally  $Q^b$  with the proviso that no more than one of  $R^{16}$  and  $R^{19}$  is  $Q^b$  at the same time and that  $Q^b$  is  $Q^{be}$ ;

$Q^b$  is selected from the group consisting of  $NR^{20}R^{21}$ ,  $Q^{be}$  wherein  $Q^{be}$  is hydrido, and  $C(NR^{25})NR^{23}R^{24}$ , with the provisos that no more than one of  $R^{20}$  and  $R^{21}$  is hydroxy at the same time and that no more than one of  $R^{23}$  and  $R^{24}$  is hydroxy at the same time;

$R^{20}$ ,  $R^{21}$ ,  $R^{23}$ ,  $R^{24}$ , and  $R^{25}$  are independently selected from the group consisting of hydrido, alkyl, and hydroxy;

$Q^s$  is selected from the group consisting of a single covalent bond,  $CH_2$ , and  $CH_2CH_2$ .

In another even more preferred embodiment of compounds of Formula I or a pharmaceutically acceptable salt thereof,

J is O;

B is optionally selected from the group consisting of hydrido, C2-C8 alkyl, C3-C8 alkenyl, C3-C8 alkynyl, and C2-C8 haloalkyl, wherein each

member of group B is optionally substituted at any carbon up to and including 6 atoms from the point of attachment of B to A with one or more of the group consisting of  $R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$ ;

$R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$  are independently selected from the

- 5 group consisting of hydrido, acetamido, haloacetamido, amidino, guanidino, alkoxy, hydroxy, amino, alkoxyamino, alkylamino, alkylthio, amidosulfonyl, monoalkyl amidosulfonyl, dialkyl amidosulfonyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, carboalkoxy, carboxy, carboxamido, cyano, and  $Q^b$ ;

- A is selected from the group consisting of single covalent bond and  
 10  $(CH(R^{15}))_{pa}-(W^7)_{rr}$  wherein  $rr$  is an integer selected from 0 through 1,  $pa$  is an integer selected from 0 through 3, and  $W^7$  is selected from the group consisting of  $(R^7)NC(O)$  and  $N(R^7)$ ;

$R^7$  is selected from the group consisting of hydrido, hydroxy and alkyl;

- $R^{15}$  is selected from the group consisting of hydrido, halo, alkyl, and  
 15 haloalkyl;

$\Psi$  is NH;

- $R^1$  and  $X^0$  are independently selected from the group consisting of  
 hydrido, hydroxy, hydroxyamino, amidino, amino, cyano, hydroxyalkyl, alkoxy,  
 alkyl, alkylamino, aminoalkyl, alkylthio, alkoxyamino, haloalkyl, haloalkoxy,  
 20 and halo;

$R^2$  is  $Z^0-Q$ ;

$Z^0$  is selected from the group consisting of covalent single bond, O, S,  
 NH, and  $CH_2$ ;

- Q is selected from the group consisting of aryl and heteroaryl wherein a  
 25 carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^9$ , the other carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^{13}$ , a carbon adjacent to  $R^9$  and two atoms from the

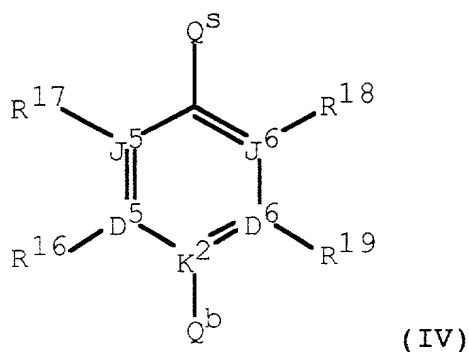


carbon at the point of attachment is optionally substituted by  $R^{10}$ , a carbon adjacent to  $R^{13}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{12}$ , and any carbon adjacent to both  $R^{10}$  and  $R^{12}$  is optionally substituted by  $R^{11}$ ;

- 5  $R^9$ ,  $R^{11}$ , and  $R^{13}$  are independently selected from the group consisting of hydrido, hydroxy, amino, amidino, guanidino, alkylamino, alkylthio, alkylsulfonamido, alkylsulfinyl, alkylsulfonyl, amidosulfonyl, monoalkyl amidosulfonyl, alkyl, alkoxy, halo, haloalkyl, haloalkoxy, hydroxyalkyl, carboxy, carboxamido, and cyano;

- 10  $R^{10}$  and  $R^{12}$  are independently selected from the group consisting of hydrido, acetamido, haloacetamido, amidino, guanidino, alkyl, alkoxy, hydroxy, amino, alkoxyamino, alkylamino, alkylsulfonamido, amidosulfonyl, monoalkyl amidosulfonyl, dialkyl amidosulfonyl, hydroxyalkyl, alkylenylamino, carboalkoxy, carboxy, carboxyalkyl, carboxamido, halo, haloalkyl, and cyano;

- 15 K is  $CH_2$ ;  
 $E^0$  is  $C(O)N(H)$ ;  
 $Y^0$  is formula (IV):



- wherein  $D^5$ ,  $D^6$ ,  $J^5$ , and  $J^6$  are independently selected from the group
- 20 consisting of C, N, O, S and a covalent bond with the provisos that no more than one is a covalent bond,  $K^2$  is C, no more than one of  $D^5$ ,  $D^6$ ,  $J^5$ , and  $J^6$  is

O, no more than one of  $D^5$ ,  $D^6$ ,  $J^5$ , and  $J^6$  is S, one of  $D^5$ ,  $D^6$ ,  $J^5$ , and  $J^6$  must be a covalent bond when two of  $D^5$ ,  $D^6$ ,  $J^5$ , and  $J^6$  are O and S, and no more than four of  $D^5$ ,  $D^6$ ,  $J^5$ , and  $J^6$  are N, with the provisos that  $R^{16}$ ,  $R^{17}$ ,  $R^{18}$ , and  $R^{19}$  are each independently selected to maintain the tetravalent nature of carbon, trivalent nature of nitrogen, the divalent nature of sulfur, and the divalent nature of oxygen;

$R^{16}$ ,  $R^{17}$ ,  $R^{18}$ , and  $R^{19}$  are independently selected from the group consisting of hydrido, amidino, guanidino, carboxy, haloalkylthio, alkoxy, hydroxy, amino, alkylamino, alkylthio, alkylsulfinyl, alkylsulfonyl, alkanoyl, haloalkanoyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, alkylenylamino, and cyano;

$R^{16}$  and  $R^{19}$  are optionally  $Q^b$  with the proviso that no more than one of  $R^{16}$  and  $R^{19}$  is  $Q^b$  at the same time and that  $Q^b$  is  $Q^{be}$ ;

$Q^b$  is selected from the group consisting of  $NR^{20}R^{21}$ ,  $Q^{be}$  wherein  $Q^{be}$  is hydrido,  $C(NR^{25})NR^{23}R^{24}$ , and  $N(R^{26})C(NR^{25})N(R^{23})(R^{24})$ , with the provisos that no more than one of  $R^{20}$  and  $R^{21}$  is hydroxy at the same time and that no more than one of  $R^{23}$  and  $R^{24}$  is hydroxy at the same time;

$R^{20}$ ,  $R^{21}$ ,  $R^{23}$ ,  $R^{24}$ ,  $R^{25}$ , and  $R^{26}$  are independently selected from the group consisting of hydrido, alkyl, and hydroxy;

$Q^s$  is selected from the group consisting of a single covalent bond,  $CH_2$ , and  $CH_2CH_2$ .

In still another even more preferred embodiment of compounds of Formula I or a pharmaceutically acceptable salt thereof,

J is O;

B is selected from the group consisting of C3-C7 cycloalkyl and C4 heterocyclyl, wherein each ring carbon is optionally substituted with  $R^{33}$ , a ring

carbon other than the ring carbon at the point of attachment of B to A is optionally substituted with oxo provided that no more than one ring carbon is substituted by oxo at the same time, ring carbons and a nitrogen adjacent to the carbon at the point of attachment are optionally substituted with  $R^9$  or  $R^{13}$ , a

- 5 ring carbon or nitrogen adjacent to the  $R^9$  position and two atoms from the point of attachment is optionally substituted with  $R^{10}$ , a ring carbon or nitrogen adjacent to the  $R^{13}$  position and two atoms from the point of attachment is optionally substituted with  $R^{12}$ , a ring carbon three atoms from the point of attachment and adjacent to the  $R^{10}$  position is optionally substituted with  $R^{11}$ ,  
 10 a ring carbon three atoms from the point of attachment and adjacent to the  $R^{12}$  position is optionally substituted with  $R^{33}$ , and a ring carbon four atoms from the point of attachment and adjacent to the  $R^{11}$  and  $R^{33}$  positions is optionally substituted with  $R^{34}$ ;

$R^9$ ,  $R^{11}$ , and  $R^{13}$  are independently selected from the group consisting

- 15 of hydrido, hydroxy, amino, amidino, guanidino, alkylamino, alkylthio, alkylsulfonamido, alkylsulfanyl, alkylsulfonyl, amidosulfonyl, monoalkyl amidosulfonyl, alkyl, alkoxy, halo, haloalkyl, haloalkoxy, hydroxyalkyl, carboxy, carboxamido, and cyano;

$R^{10}$  and  $R^{12}$  are independently selected from the group consisting of

- 20 hydrido, acetamido, haloacetamido, amidino, guanidino, alkyl, alkoxy, hydroxy, amino, alkoxyamino, alkylamino, alkylsulfonamido, amidosulfonyl, monoalkyl amidosulfonyl, dialkyl amidosulfonyl, hydroxyalkyl, alkylenylamino, carboalkoxy, carboxy, carboxyalkyl, carboxamido, halo, haloalkyl, and cyano;

$R^{33}$  and  $R^{34}$  are independently selected from the group consisting of

- 25 hydrido, acetamido, haloacetamido, amidino, guanidino, alkoxy, hydroxy, amino, alkoxyamino, alkylamino, alkylthio, amidosulfonyl, monoalkyl amidosulfonyl,

dialkyl amidosulfonyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, carboalkoxy, carboxy, carboxamido, cyano, and  $Q^b$ ;

A is selected from the group consisting of single covalent bond and  $(CH(R^{15}))_{pa}-(W^7)_{rr}$  wherein  $rr$  is an integer selected from 0 through 1,  $pa$  is

- 5 an integer selected from 0 through 3, and  $W^7$  is selected from the group consisting of  $(R^7)NC(O)$  and  $N(R^7)$ ;

$R^7$  is selected from the group consisting of hydrido, hydroxy and alkyl;

$R^{15}$  is selected from the group consisting of hydrido, halo, alkyl, and haloalkyl;

- 10  $\Psi$  is NH;

$R^1$  and  $X^0$  are independently selected from the group consisting of hydrido, hydroxy, hydroxyamino, amidino, amino, cyano, hydroxyalkyl, alkoxy, alkyl, alkylamino, aminoalkyl, alkylthio, alkoxyamino, haloalkyl, haloalkoxy, and halo;

- 15  $R^2$  is  $Z^0-Q$ ;

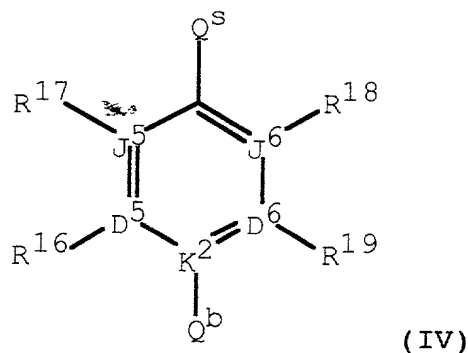
$Z^0$  is selected from the group consisting of covalent single bond, O, S, NH, and  $CH_2$ ;

- 20 Q is selected from the group consisting of aryl and heteroaryl wherein a carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^9$ , the other carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^{13}$ , a carbon adjacent to  $R^9$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{10}$ , a carbon adjacent to  $R^{13}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{12}$ , and any carbon adjacent to both  $R^{10}$  and  $R^{12}$  is
- 25 optionally substituted by  $R^{11}$ ;

K is CH<sub>2</sub>;

E<sup>0</sup> is C(O)N(H);

Y<sup>0</sup> is formula (IV):



- 5            wherein D<sup>5</sup>, D<sup>6</sup>, J<sup>5</sup>, and J<sup>6</sup> are independently selected from the group consisting of C, N, O, S and a covalent bond with the provisos that no more than one is a covalent bond, K<sup>2</sup> is C, no more than one of D<sup>5</sup>, D<sup>6</sup>, J<sup>5</sup>, and J<sup>6</sup> is O, no more than one of D<sup>5</sup>, D<sup>6</sup>, J<sup>5</sup>, and J<sup>6</sup> is S, one of D<sup>5</sup>, D<sup>6</sup>, J<sup>5</sup>, and J<sup>6</sup> must be a covalent bond when two of D<sup>5</sup>, D<sup>6</sup>, J<sup>5</sup>, and J<sup>6</sup> are O and S, and no more
- 10    than four of D<sup>5</sup>, D<sup>6</sup>, J<sup>5</sup>, and J<sup>6</sup> are N, with the provisos that R<sup>16</sup>, R<sup>17</sup>, R<sup>18</sup>, and R<sup>19</sup> are each independently selected to maintain the tetravalent nature of carbon, trivalent nature of nitrogen, the divalent nature of sulfur, and the divalent nature of oxygen;

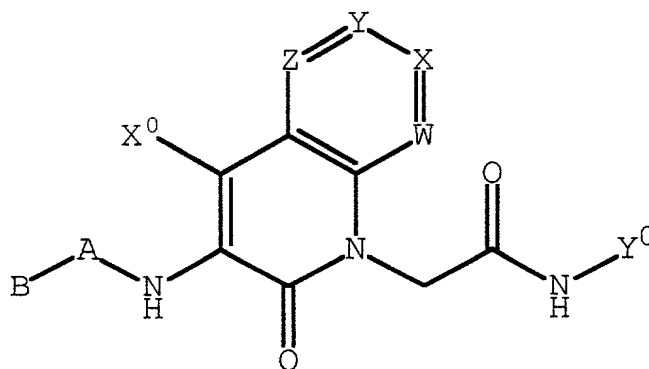
- R<sup>16</sup>, R<sup>17</sup>, R<sup>18</sup>, and R<sup>19</sup> are independently selected from the group
- 15    consisting of hydrido, amidino, guanidino, carboxy, haloalkylthio, alkoxy, hydroxy, amino, alkylamino, alkylthio, alkylsulfinyl, alkylsulfonyl, alkanoyl, haloalkanoyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, alkylenylamino, and cyano;
- R<sup>16</sup> and R<sup>19</sup> are optionally Q<sup>b</sup> with the proviso that no more than one of
- 20    R<sup>16</sup> and R<sup>19</sup> is Q<sup>b</sup> at the same time and that Q<sup>b</sup> is Q<sup>be</sup>;

$Q^b$  is selected from the group consisting of  $NR^{20}R^{21}$ ,  $Q^{be}$  wherein  $Q^{be}$  is hydrido, and  $C(NR^{25})NR^{23}R^{24}$ , with the provisos that no more than one of  $R^{20}$  and  $R^{21}$  is hydroxy at the same time and that no more than one of  $R^{23}$  and  $R^{24}$  is hydroxy at the same time;

5  $R^{20}$ ,  $R^{21}$ ,  $R^{23}$ ,  $R^{24}$ , and  $R^{25}$  are independently selected from the group consisting of hydrido, alkyl, and hydroxy;

$Q^s$  is selected from the group consisting of a single covalent bond,  $CH_2$ , and  $CH_2CH_2$ .

10 In a further even more preferred embodiment of compounds of Formula I or a pharmaceutically acceptable salt thereof, said compound is the formula:



wherein;

B is phenyl or a heteroaryl of 5 or 6 ring members, wherein a carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^{32}$ , the other carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^{36}$ , a carbon adjacent to  $R^{32}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{33}$ , a carbon adjacent to  $R^{36}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{35}$ , and any carbon adjacent to both  $R^{33}$  and  $R^{35}$  is

20 optionally substituted by  $R^{34}$ ;

$R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$  are independently selected from the group consisting of hydrido, acetamido, haloacetamido, amidino, guanidino, alkoxy, hydroxy, amino, alkoxyamino, alkylamino, alkylthio, amidosulfonyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, hydroxyhaloalkyl, carboalkoxy, carboxy, carboxamido, cyano, and  $Q^b$ ;

B is optionally selected from the group consisting of hydrido, C2-C8 alkyl, C3-C8 alkenyl, C3-C8 alkynyl, and C2-C8 haloalkyl, wherein each member of group B is optionally substituted at any carbon up to and including 6 atoms from the point of attachment of B to A with one or more of the group consisting of  $R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$ ;

B is a C3-C7 cycloalkyl or C4-C6 saturated heterocyclyl, wherein each ring carbon is optionally substituted with  $R^{33}$ , a ring carbon other than the ring carbon at the point of attachment of B to A is optionally substituted with oxo provided that no more than one ring carbon is substituted by oxo at the same time, ring carbons and nitrogen adjacent to the carbon atom at the point of attachment are optionally substituted with  $R^9$  or  $R^{13}$ , a ring carbon or nitrogen adjacent to the  $R^9$  position and two atoms from the point of attachment is optionally substituted with  $R^{10}$ , a ring carbon or nitrogen adjacent to the  $R^{13}$  position and two atoms from the point of attachment is optionally substituted with  $R^{12}$ , a ring carbon or nitrogen three atoms from the point of attachment and adjacent to the  $R^{10}$  position is optionally substituted with  $R^{11}$ , a ring carbon or nitrogen three atoms from the point of attachment and adjacent to the  $R^{12}$  position is optionally substituted with  $R^{33}$ , and a ring carbon or nitrogen four atoms from the point of attachment and adjacent to the  $R^{11}$  and  $R^{33}$  positions is optionally substituted with  $R^{34}$ ;

$R^9$ ,  $R^{11}$ , and  $R^{13}$  are independently selected from the group consisting of hydrido, hydroxy, amino, amidino, guanidino, alkylamino, alkylthio,

alkylsulfonamido, alkylsulfinyl, alkylsulfonyl, amidosulfonyl, alkyl, alkoxy, halo, haloalkyl, haloalkoxy, hydroxyalkyl, hydroxyhaloalkyl, carboxy, carboxamido, and cyano;

$R^{10}$  and  $R^{12}$  are independently selected from the group consisting of

- 5 hydrido, acetamido, haloacetamido, amidino, guanidino, alkyl, aryl, aralkyl, cycloalkyl, cycloalkylalkyl, heteroaryl, heterocyclyl, alkoxy, cycloalkoxy, cycloalkylalkoxy, aralkoxy, aryloxy, heteroaryloxy, heteroaralkoxy, heterocyclyloxy, heterocyclalkoxy, hydroxy, amino, alkoxyamino, alkylamino, arylamino, aralkylamino, heteroarylamino, 10 heteroaralkylamino, heterocyclalkylamino, heterocyclalkylamino, alkylsulfonamido, amidosulfonyl, arylsulfinyl, aralkylsulfinyl, cycloalkylsulfinyl, heteroarylsulfinyl, arylsulfonyl, aralkylsulfonyl, cycloalkylsulfonyl, heteroarylsulfonyl, hydroxyalkyl, hydroxyhaloalkyl, aminoalkyl, carboalkoxy, carboxy, carboxyalkyl, carboxamido, halo, haloalkyl, 15 and cyano;

A is a single covalent bond or  $(CH(R^{15}))_{pa}-(W^7)_{rr}$  wherein  $rr$  is 0 or 1,  $pa$  is an integer selected from 0 through 3, and  $W^7$  is  $(R^7)NC(O)$  or  $N(R^7)$ ;

$R^7$  is selected from the group consisting of hydrido, hydroxy and alkyl;

- 20  $R^{15}$  is selected from the group consisting of hydrido, halo, alkyl, and haloalkyl;

$X^0$  is selected from the group consisting of hydrido, alkyl, cyano, halo, haloalkyl, haloalkoxy, amino, aminoalkyl, alkylamino, amidino, hydroxy, hydroxyamino, alkoxy, hydroxyalkyl, alkoxyamino, thiol, and alkylthio;

- 25 W, X, Y, and Z are independently selected from the group consisting of  $C(R^9)$ ,  $C(R^{10})$ ,  $C(R^{11})$ ,  $C(R^{12})$ , N,  $N(R^{10})$ , O, S and a covalent bond with the provisos that one of W, X, Y, and Z is independently selected to be a covalent bond when one of W, X, Y, and Z is O or S, no more than one of W, X, Y, and Z is optionally O or S, and no more than three of W, X, Y, and Z are optionally 30 N or  $N(R^{10})$ ;



$Y^0$  is phenyl or a heteroaryl of 5 or 6 ring members, wherein one carbon of said phenyl or said heteroaryl is substituted by  $Q^s$ , a carbon two or three contiguous atoms from the point of attachment of  $Q^s$  is substituted by  $Q^b$ , a carbon adjacent to the point of attachment of  $Q^s$  is optionally substituted by  $R^{17}$ , another carbon adjacent to the point of attachment of  $Q^s$  is optionally substituted by  $R^{18}$ , a carbon adjacent to  $Q^b$  is optionally substituted by  $R^{16}$ , and another carbon adjacent to  $Q^b$  is optionally substituted by  $R^{19}$ ;

$R^{16}$ ,  $R^{17}$ ,  $R^{18}$ , and  $R^{19}$  are independently selected from the group consisting of hydrido, amidino, guanidino, carboxy, haloalkylthio, alkoxy, hydroxy, amino, alkylamino, alkylthio, alkylsulfinyl, alkylsulfonyl, alkanoyl, haloalkanoyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, aminoalkyl, and cyano;

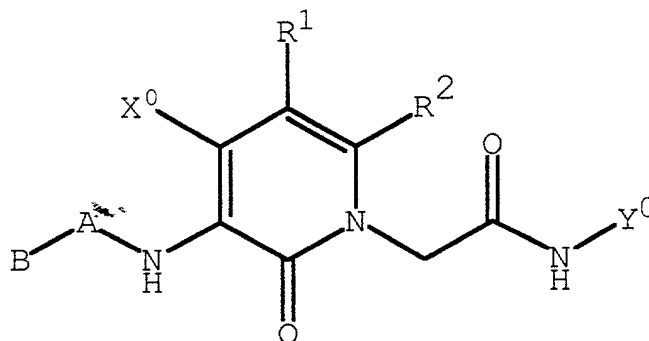
$R^{16}$  or  $R^{19}$  is optionally selected from the group consisting of  $NR^{20}R^{21}$ ,  $N(R^{26})C(NR^{25})(R^{23})(R^{24})$ , and  $C(NR^{25})NR^{23}R^{24}$ , with the proviso that  $R^{16}$ ,  $R^{19}$ , and  $Q^b$  are not simultaneously hydrido;

$Q^b$  is selected from the group consisting of  $NR^{20}R^{21}$ , hydrido,  $C(NR^{25})NR^{23}R^{24}$ , and  $N(R^{26})C(NR^{25})(R^{23})(R^{24})$ , with the provisos that no more than one of  $R^{20}$  and  $R^{21}$  is hydroxy at the same time and that no more than one of  $R^{23}$  and  $R^{24}$  is hydroxy at the same time;

$R^{20}$ ,  $R^{21}$ ,  $R^{23}$ ,  $R^{24}$ ,  $R^{25}$ , and  $R^{26}$  are independently selected from the group consisting of hydrido, alkyl, and hydroxy;

$Q^s$  is selected from the group consisting of a single covalent bond,  $CH_2$ , and  $CH_2CH_2$ .

In a fifth even more preferred embodiment of compounds of Formula I or a pharmaceutically acceptable salt thereof, said compound is the formula:



wherein;

- 5           B is phenyl or a heteroaryl of 5 or 6 ring members, wherein a carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^{32}$ , the other carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^{36}$ , a carbon adjacent to  $R^{32}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{33}$ , a carbon adjacent to  $R^{36}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{35}$ , and any carbon adjacent to both  $R^{33}$  and  $R^{35}$  is optionally substituted by  $R^{34}$ ;

- 10            $R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$  are independently selected from the group consisting of hydrido, acetamido, haloacetamido, amidino, guanidino, alkoxy, hydroxy, amino, alkoxyamino, alkylamino, alkylthio, amidosulfonyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, hydroxyhaloalkyl, carboalkoxy, carboxy, carboxamido, cyano, and  $Q^b$ ;

- 15           A is a single covalent bond or  $(CH(R^{15}))_{pa}-(W^7)_{rr}$  wherein rr is 0 or 1, pa is an integer selected from 0 through 3, and  $W^7$  is  $(R^7)NC(O)$  or  $N(R^7)$ ;
- 20            $R^7$  is selected from the group consisting of hydrido, hydroxy and alkyl;

$R^{15}$  is selected from the group consisting of hydrido, halo, alkyl, and haloalkyl;

$R^1$  and  $X^O$  are independently selected from the group consisting of hydrido, hydroxy, hydroxyamino, amidino, amino, cyano, hydroxyalkyl, alkoxy, alkyl, alkylamino, aminoalkyl, alkylthio, alkoxyamino, haloalkyl, haloalkoxy, and halo;

$R^2$  is  $Z^0-Q$ ;

$Z^0$  is a covalent single bond or  $W^0-(CH(R^{42}))_p$  wherein  $p$  is 0 or 1 and

$W^0$  is selected from the group consisting of O, S, and  $N(R^{41})$ ;

$R^{41}$  and  $R^{42}$  are independently hydrido or alkyl;

Q is phenyl or a heteroaryl of 5 or 6 ring members, wherein a carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^9$ , the other carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^{13}$ , a carbon adjacent to  $R^9$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{10}$ , a carbon adjacent to  $R^{13}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{12}$ , and any carbon adjacent to both  $R^{10}$  and  $R^{12}$  is optionally substituted by  $R^{11}$ , with the proviso that Q is other than a phenyl when  $Z^0$  is a covalent single bond;

$R^9$ ,  $R^{11}$ , and  $R^{13}$  are independently selected from the group consisting of hydrido, hydroxy, amino, amidino, guanidino, alkylamino, alkylthio, alkylsulfonamido, alkylsulfinyl, alkylsulfonyl, amidosulfonyl, alkyl, alkoxy, halo, haloalkyl, haloalkoxy, hydroxyalkyl, hydroxyhaloalkyl, carboxy, carboxamido, and cyano;

$R^{10}$  and  $R^{12}$  are independently selected from the group consisting of hydrido, acetamido, haloacetamido, amidino, guanidino, alkyl, aryl, aralkyl, cycloalkyl, cycloalkylalkyl, heteroaryl, heterocyclyl, alkoxy, cycloalkoxy,

cycloalkylalkoxy, aralkoxy, aryloxy, heteroaryloxy,  
heteroaralkoxy, heterocyclyloxy, heterocyclylalkoxy, hydroxy, amino,  
alkoxyamino, alkylamino, arylamino, aralkylamino, heteroarylamino,  
heteroaralkylamino, heterocyclylamino, heterocyclylalkylamino,  
5 alkylsulfonamido, amidosulfonyl, arylsulfinyl, aralkylsulfinyl,  
cycloalkylsulfinyl, heteroarylsulfinyl, arylsulfonyl, aralkylsulfonyl,  
cycloalkylsulfonyl, heteroarylsulfonyl, hydroxyalkyl, hydroxyhaloalkyl,  
aminoalkyl, carboalkoxy, carboxy, carboxyalkyl, carboxamido, halo, haloalkyl,  
and cyano;

10  $Y^0$  is phenyl or a heteroaryl of 5 or 6 ring members, wherein one carbon  
of said phenyl or said heteroaryl is substituted by  $Q^s$ , a carbon two or three  
contiguous atoms from the point of attachment of  $Q^s$  is substituted by  $Q^b$ , a  
carbon adjacent to the point of attachment of  $Q^s$  is optionally substituted by  
 $R^{17}$ , another carbon adjacent to the point of attachment of  $Q^s$  is optionally  
15 substituted by  $R^{18}$ , a carbon adjacent to  $Q^b$  is optionally substituted by  $R^{16}$ ,  
and another carbon adjacent to  $Q^b$  is optionally substituted by  $R^{19}$ ;

$R^{16}$ ,  $R^{17}$ ,  $R^{18}$ , and  $R^{19}$  are independently selected from the group  
consisting of hydrido, amidino, guanidino, carboxy, haloalkylthio, alkoxy,  
hydroxy, amino, alkylamino, alkylthio, alkylsulfinyl, alkylsulfonyl, alkanoyl,  
20 haloalkanoyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, aminoalkyl, and  
cyano;

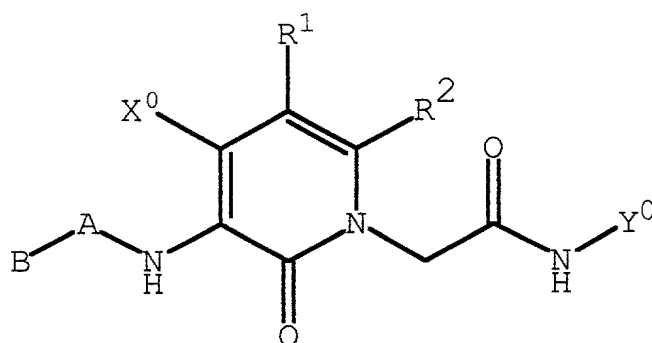
$R^{16}$  or  $R^{19}$  is optionally  $NR^{20}R^{21}$  or  $C(NR^{25})NR^{23}R^{24}$ , with the  
proviso that  $R^{16}$ ,  $R^{19}$ , and  $Q^b$  are not simultaneously hydrido;

$Q^b$  is selected from the group consisting of  $NR^{20}R^{21}$ , hydrido, and  
25  $C(NR^{25})NR^{23}R^{24}$ , with the provisos that no more than one of  $R^{20}$  and  $R^{21}$  is  
hydroxy at the same time and that no more than one of  $R^{23}$  and  $R^{24}$  is hydroxy at  
the same time;

$R^{20}$ ,  $R^{21}$ ,  $R^{23}$ ,  $R^{24}$ , and  $R^{25}$  are independently selected from the group consisting of hydrido, alkyl, and hydroxy;

$Q^s$  is selected from the group consisting of a single covalent bond,  $CH_2$ , and  $CH_2CH_2$ .

- 5 In a sixth even more preferred embodiment of compounds of Formula I or a pharmaceutically acceptable salt thereof, said compound is the formula:



wherein;

- 10 B is selected from the group consisting of hydrido, C2-C8 alkyl, C3-C8 alkenyl, C3-C8 alkynyl, and C2-C8 haloalkyl, wherein each member of group B is optionally substituted at any carbon up to and including 6 atoms from the point of attachment of B to A with one or more of the group consisting of  $R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$ ;

- 15  $R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$  are independently selected from the group consisting of hydrido, acetamido, haloacetamido, amidino, guanidino, alkoxy, hydroxy, amino, alkoxyamino, alkylamino, alkylthio, amidosulfonyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, hydroxyhaloalkyl, carboalkoxy, carboxy, carboxamido, cyano, and  $Q^b$ ;

- 20 A is a single covalent bond or  $(CH(R^{15}))_{pa}-(W^7)_{rr}$  wherein rr is 0 or 1, pa is an integer selected from 0 through 3, and  $W^7$  is  $(R^7)NC(O)$  or  $N(R^7)$ ;  
 $R^7$  is selected from the group consisting of hydrido, hydroxy and alkyl;

$R^{15}$  is selected from the group consisting of hydrido, halo, alkyl, and haloalkyl;

$R^1$  and  $X^O$  are independently selected from the group consisting of hydrido, hydroxy, hydroxyamino, amidino, amino, cyano, hydroxyalkyl, alkoxy, alkyl, alkylamino, aminoalkyl, alkylthio, alkoxyamino, haloalkyl, haloalkoxy, and halo;

$R^2$  is  $Z^0$ -Q;

$Z^0$  is a covalent single bond or  $W^0-(CH(R^{42}))_p$  wherein p is 0 or 1 and

$W^0$  is selected from the group consisting of O, S, and  $N(R^{41})$ ;

$R^{41}$  and  $R^{42}$  are independently hydrido or alkyl;

Q is phenyl or a heteroaryl of 5 or 6 ring members, wherein a carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^9$ , the other carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^{13}$ , a carbon adjacent to  $R^9$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{10}$ , a carbon adjacent to  $R^{13}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{12}$ , and any carbon adjacent to both  $R^{10}$  and  $R^{12}$  is optionally substituted by  $R^{11}$ , with the proviso that Q is other than a phenyl when  $Z^0$  is a covalent single bond;

$R^9$ ,  $R^{11}$ , and  $R^{13}$  are independently selected from the group consisting of hydrido, hydroxy, amino, amidino, guanidino, alkylamino, alkylthio, alkylsulfonamido, alkylsulfinyl, alkylsulfonyl, amidosulfonyl, alkyl, alkoxy, halo, haloalkyl, haloalkoxy, hydroxyalkyl, hydroxyhaloalkyl, carboxy, carboxamido, and cyano;

$R^{10}$  and  $R^{12}$  are independently selected from the group consisting of hydrido, acetamido, haloacetamido, amidino, guanidino, alkyl, aryl, aralkyl, cycloalkyl, cycloalkylalkyl, heteroaryl, heterocyclyl, alkoxy, cycloalkoxy,

cycloalkylalkoxy, aralkoxy, aryloxy, heteroaryloxy,  
heteroaralkoxy, heterocyclyloxy, heterocyclylalkoxy, hydroxy, amino,  
alkoxyamino, alkylamino, arylamino, aralkylamino, heteroarylamino,  
heteroaralkylamino, heterocyclylamino, heterocyclylalkylamino,  
5 alkylsulfonamido, amidosulfonyl, arylsulfinyl, aralkylsulfinyl,  
cycloalkylsulfinyl, heteroarylsulfinyl, arylsulfonyl, aralkylsulfonyl,  
cycloalkylsulfonyl, heteroarylsulfonyl, hydroxyalkyl, hydroxyhaloalkyl,  
aminoalkyl, carboalkoxy, carboxy, carboxyalkyl, carboxamido, halo, haloalkyl,  
and cyano;

10  $Y^0$  is phenyl or a heteroaryl of 5 or 6 ring members, wherein one carbon  
of said phenyl or said heteroaryl is substituted by  $Q^s$ , a carbon two or three  
contiguous atoms from the point of attachment of  $Q^s$  is substituted by  $Q^b$ , a  
carbon adjacent to the point of attachment of  $Q^s$  is optionally substituted by  
 $R^{17}$ , another carbon adjacent to the point of attachment of  $Q^s$  is optionally  
15 substituted by  $R^{18}$ , a carbon adjacent to  $Q^b$  is optionally substituted by  $R^{16}$ ,  
and another carbon adjacent to  $Q^b$  is optionally substituted by  $R^{19}$ ;

$R^{16}$ ,  $R^{17}$ ,  $R^{18}$ , and  $R^{19}$  are independently selected from the group  
consisting of hydrido, amidino, guanidino, carboxy, haloalkylthio, alkoxy,  
hydroxy, amino, alkylamino, alkylthio, alkylsulfinyl, alkylsulfonyl, alkanoyl,  
20 haloalkanoyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, aminoalkyl, and  
cyano;

$R^{16}$  or  $R^{19}$  is optionally selected from the group consisting of  
 $NR^{20}R^{21}$ ,  $C(NR^{25})NR^{23}R^{24}$ , and  $N(R^{26})C(NR^{25})N(R^{23})(R^{24})$ , with the  
proviso that  $R^{16}$ ,  $R^{19}$ , and  $Q^b$  are not simultaneously hydrido;

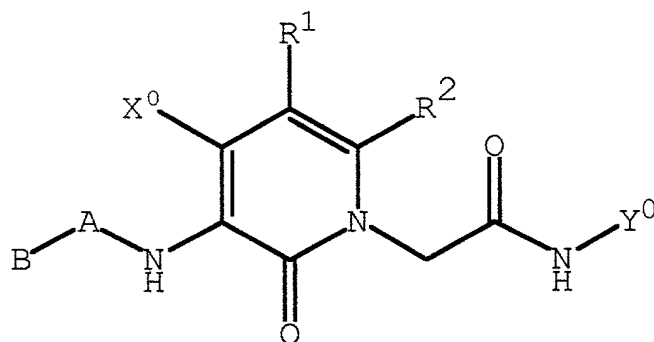
25  $Q^b$  is selected from the group consisting of  $NR^{20}R^{21}$ , hydrido,  
 $C(NR^{25})NR^{23}R^{24}$ , and  $N(R^{26})C(NR^{25})N(R^{23})(R^{24})$ , with the provisos that

no more than one of  $R^{20}$  and  $R^{21}$  is hydroxy at the same time and that no more than one of  $R^{23}$  and  $R^{24}$  is hydroxy at the same time;

$R^{20}$ ,  $R^{21}$ ,  $R^{23}$ ,  $R^{24}$ ,  $R^{25}$ , and  $R^{26}$  are independently selected from the group consisting of hydrido, alkyl, and hydroxy;

- 5  $Q^S$  is selected from the group consisting of a single covalent bond,  $CH_2$ , and  $CH_2CH_2$ .

In a seventh even more preferred embodiment of compounds of Formula I or a pharmaceutically acceptable salt thereof, said compound is the formula:



10

wherein;

- B is a C3-C7 cycloalkyl or a C4-C6 saturated heterocyclyl, wherein each ring carbon is optionally substituted with  $R^{33}$ , a ring carbon other than the ring carbon at the point of attachment of B to A is optionally substituted with oxo provided that no more than one ring carbon is substituted by oxo at the same time, ring carbons and a nitrogen adjacent to the carbon atom at the point of attachment are optionally substituted with  $R^9$  or  $R^{13}$ , a ring carbon or nitrogen adjacent to the  $R^9$  position and two atoms from the point of attachment is optionally substituted with  $R^{10}$ , a ring carbon or nitrogen adjacent to the  $R^{13}$  position and two atoms from the point of attachment is optionally substituted with  $R^{12}$ , a ring carbon or nitrogen three atoms from the point of attachment
- 15
- 20



and adjacent to the  $R^{10}$  position is optionally substituted with  $R^{11}$ , a ring carbon or nitrogen three atoms from the point of attachment and adjacent to the  $R^{12}$  position is optionally substituted with  $R^{33}$ , and a ring carbon or nitrogen four atoms from the point of attachment and adjacent to the  $R^{11}$  and  $R^{33}$  positions is optionally substituted with  $R^{34}$ ;

$R^9$ ,  $R^{11}$ , and  $R^{13}$  are independently selected from the group consisting of hydrido, hydroxy, amino, amidino, guanidino, alkylamino, alkylthio, alkylsulfonamido, alkylsulfinyl, alkylsulfonyl, amidosulfonyl, alkyl, alkoxy, halo, haloalkyl, haloalkoxy, hydroxyalkyl, hydroxyhaloalkyl, carboxy, carboxamido, and cyano;

$R^{10}$  and  $R^{12}$  are independently selected from the group consisting of hydrido, acetamido, haloacetamido, amidino, guanidino, alkyl, aryl, aralkyl, cycloalkyl, cycloalkylalkyl, heteroaryl, heterocyclyl, alkoxy, cycloalkoxy, cycloalkylalkoxy, aralkoxy, aryloxy, heteroaryloxy, heteroaralkoxy, heterocyclyloxy, heterocyclylalkoxy, hydroxy, amino, alkoxyamino, alkylamino, arylamino, aralkylamino, heteroarylamino, heteroaralkylamino, heterocyclylamino, heterocyclylalkylamino, alkylsulfonamido, amidosulfonyl, arylsulfinyl, aralkylsulfinyl, cycloalkylsulfinyl, heteroarylsulfinyl, arylsulfonyl, aralkylsulfonyl, cycloalkylsulfonyl, heteroarylsulfonyl, hydroxyalkyl, hydroxyhaloalkyl, aminoalkyl, carboalkoxy, carboxy, carboxyalkyl, carboxamido, halo, haloalkyl, and cyano;

$R^{33}$  and  $R^{34}$  are independently selected from the group consisting of hydrido, acetamido, haloacetamido, amidino, guanidino, alkoxy, hydroxy, amino, alkoxyamino, alkylamino, alkylthio, amidosulfonyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, hydroxyhaloalkyl, carboalkoxy, carboxy, carboxamido, cyano, and  $Q^b$ ;

A is a single covalent bond or  $(CH(R^{15}))_{pa}-(W^7)_{rr}$  wherein  $rr$  is 0 or 1,  $pa$  is an integer selected from 0 through 3, and  $W^7$  is  $(R^7)NC(O)$  or  $N(R^7)$ ;

$R^7$  is selected from the group consisting of hydrido, hydroxy and alkyl;

$R^{15}$  is selected from the group consisting of hydrido, halo, alkyl, and haloalkyl;

$R^1$  and  $X^O$  are independently selected from the group consisting of hydrido, hydroxy, hydroxyamino, amidino, amino, cyano, hydroxyalkyl, alkoxy, alkyl, alkylamino, aminoalkyl, alkylthio, alkoxyamino, haloalkyl, haloalkoxy, and halo;

$R^2$  is  $Z^0-Q$ ;

$Z^0$  is a covalent single bond or  $W^0-(CH(R^{42}))_p$  wherein  $p$  is 0 or 1 and

$W^0$  is selected from the group consisting of O, S, and  $N(R^{41})$ ;

$R^{41}$  and  $R^{42}$  are independently hydrido or alkyl;

$Q$  is phenyl or a heteroaryl of 5 or 6 ring members, wherein a carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^9$ , the other carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^{13}$ , a carbon adjacent to  $R^9$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{10}$ , a carbon adjacent to  $R^{13}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{12}$ , and any carbon adjacent to both  $R^{10}$  and  $R^{12}$  is optionally substituted by  $R^{11}$ , with the proviso that  $Q$  is other than a phenyl when  $Z^0$  is a covalent single bond;

$Y^0$  is phenyl or a heteroaryl of 5 or 6 ring members, wherein one carbon of said phenyl or said heteroaryl is substituted by  $Q^s$ , a carbon two or three contiguous atoms from the point of attachment of  $Q^s$  is substituted by  $Q^b$ , a carbon adjacent to the point of attachment of  $Q^s$  is optionally substituted by

$R^{17}$ , another carbon adjacent to the point of attachment of  $Q^s$  is optionally substituted by  $R^{18}$ , a carbon adjacent to  $Q^b$  is optionally substituted by  $R^{16}$ , and another carbon adjacent to  $Q^b$  is optionally substituted by  $R^{19}$ ;

$R^{16}$ ,  $R^{17}$ ,  $R^{18}$ , and  $R^{19}$  are independently selected from the group

- 5 consisting of hydrido, amidino, guanidino, carboxy, haloalkylthio, alkoxy, hydroxy, amino, alkylamino, alkylthio, alkylsulfinyl, alkylsulfonyl, alkanoyl, haloalkanoyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, aminoalkyl, and cyano;

$R^{16}$  or  $R^{19}$  is optionally  $NR^{20}R^{21}$  or  $C(NR^{25})NR^{23}R^{24}$ , with the

- 10 proviso that  $R^{16}$ ,  $R^{19}$ , and  $Q^b$  are not simultaneously hydrido;

$Q^b$  is selected from the group consisting of  $NR^{20}R^{21}$ , hydrido, and  $C(NR^{25})NR^{23}R^{24}$ , with the provisos that no more than one of  $R^{20}$  and  $R^{21}$  is hydroxy at the same time and that no more than one of  $R^{23}$  and  $R^{24}$  is hydroxy at the same time;

- 15  $R^{20}$ ,  $R^{21}$ ,  $R^{23}$ ,  $R^{24}$ , and  $R^{25}$  are independently selected from the group consisting of hydrido, alkyl, and hydroxy;

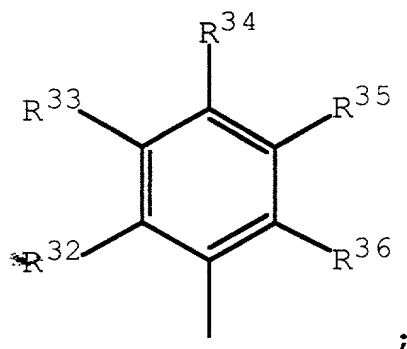
$Q^s$  is selected from the group consisting of a single covalent bond,  $CH_2$ , and  $CH_2CH_2$ .

- 20 In a most preferred embodiment of compounds of Formula I or a pharmaceutically acceptable salt thereof,

J is O;

25

B is the Formula:



;

$R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$  are independently selected from the

- 5 group consisting of hydrido, acetamido, haloacetamido, amidino, guanidino, alkoxy, hydroxy, amino, alkoxyamino, alkylamino, alkylthio, amidosulfonyl, monoalkyl amidosulfonyl, dialkyl amidosulfonyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, carboalkoxy, carboxy, carboxamido, cyano, and  $Q^b$ ;

A is selected from the group consisting of single covalent bond and  $(CH(R^{15}))_{pa}-(W^7)_{rr}$  wherein  $rr$  is an integer selected from 0 through 1,  $pa$  is

- 10 an integer selected from 0 through 3, and  $W^7$  is  $N(R^7)$ ;

$R^7$  is selected from the group consisting of hydrido and alkyl;

$R^{15}$  is selected from the group consisting of hydrido, halo, alkyl, and haloalkyl;

$\Psi$  is NH;

- 15  $R^1$  and  $X^0$  are independently selected from the group consisting of hydrido, hydroxy, hydroxyamino, amidino, amino, cyano, hydroxyalkyl, alkoxy, alkyl, alkylamino, aminoalkyl, alkylthio, alkoxyamino, haloalkyl, haloalkoxy, and halo;

$R^2$  is  $Z^0-Q$ ;

- 20  $Z^0$  is a covalent single bond;

$Q$  is selected from the group consisting of aryl and heteroaryl wherein a carbon adjacent to the carbon at the point of attachment is optionally substituted

by  $R^9$ , the other carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^{13}$ , a carbon adjacent to  $R^9$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{10}$ , a carbon adjacent to  $R^{13}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{12}$ , and any carbon adjacent to both  $R^{10}$  and  $R^{12}$  is optionally substituted by  $R^{11}$ ;

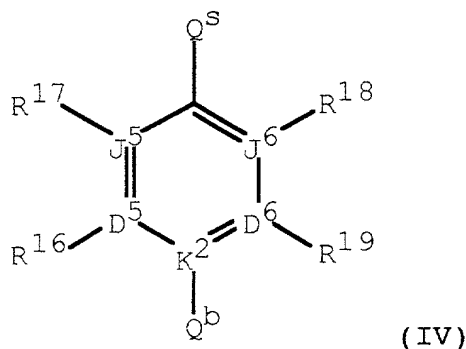
$R^9$ ,  $R^{11}$ , and  $R^{13}$  are independently selected from the group consisting of hydrido, hydroxy, amino, amidino, guanidino, alkylamino, alkylthio, alkoxy, alkylsulfinyl, alkylsulfonyl, amidosulfonyl, monoalkyl amidosulfonyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, carboxy, carboxamido, and cyano;

$R^{10}$  and  $R^{12}$  are independently selected from the group consisting of hydrido, acetamido, haloacetamido, amidino, guanidino, alkyl, alkoxy, alkoxyamino, aminoalkyl, hydroxy, amino, alkylamino, alkylsulfonamido, amidosulfonyl, monoalkyl amidosulfonyl, dialkyl amidosulfonyl, hydroxyalkyl, aminoalkyl, halo, haloalkyl, carboalkoxy, carboxy, carboxyalkyl, carboxyamido, and cyano;

K is  $CH_2$ ;

$E^0$  is  $C(O)N(H)$ ;

$Y^0$  is formula (IV):



- wherein  $D^5$ ,  $D^6$ ,  $J^5$ , and  $J^6$  are independently selected from the group consisting of C, N, O, S and a covalent bond with the provisos that no more than one is a covalent bond,  $K^2$  is C, no more than one of  $D^5$ ,  $D^6$ ,  $J^5$ , and  $J^6$  is O, no more than one of  $D^5$ ,  $D^6$ ,  $J^5$ , and  $J^6$  is S, one of  $D^5$ ,  $D^6$ ,  $J^5$ , and  $J^6$  must be a covalent bond when two of  $D^5$ ,  $D^6$ ,  $J^5$ , and  $J^6$  are O and S, and no more than four of  $D^5$ ,  $D^6$ ,  $J^5$ , and  $J^6$  are N;

- $R^{16}$ ,  $R^{17}$ ,  $R^{18}$ , and  $R^{19}$  are independently selected from the group consisting of hydrido, amidino, guanidino, carboxy, haloalkylthio, alkoxy, hydroxy, amino, alkylamino, alkylthio, alkylsulfinyl, alkylsulfonyl, alkanoyl, haloalkanoyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, aminoalkyl, and cyano;

$R^{16}$  and  $R^{19}$  are optionally  $Q^b$  with the proviso that no more than one of  $R^{16}$  and  $R^{19}$  is  $Q^b$  at the same time and that  $Q^b$  is  $Q^{be}$ ;

- $Q^b$  is selected from the group consisting of  $NR^{20}R^{21}$ ,  $Q^{be}$  wherein  $Q^{be}$  is hydrido, and  $C(NR^{25})NR^{23}R^{24}$ ;

$R^{20}$ ,  $R^{21}$ ,  $R^{23}$ ,  $R^{24}$ , and  $R^{25}$  are independently selected from the group consisting of hydrido and alkyl;

$Q^s$  is  $CH_2$ .

- In another most preferred embodiment of compounds of Formula I or a pharmaceutically acceptable salt thereof,

J is O;

- B is optionally selected from the group consisting of hydrido, C2-C8 alkyl, C3-C8 alkenyl, C3-C8 alkynyl, and C2-C8 haloalkyl, wherein each member of group B is optionally substituted at any carbon up to and including 6 atoms from the point of attachment of B to A with one or more of the group consisting of  $R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$ ;

group consisting of hydrido, acetamido, haloacetamido, amidino, guanidino, alkoxy, hydroxy, amino, alkoxyamino, alkylamino, alkylthio, amidosulfonyl, monoalkyl amidosulfonyl, dialkyl amidosulfonyl, alkyl, halo, haloalkyl,

A is selected from the group consisting of single covalent bond and  $(\text{CH}(\text{R}^{15}))_{\text{pa}}(\text{W}^7)_{\text{rr}}$  wherein rr is an integer selected from 0 through 1, pa is an integer selected from 0 through 3, and  $\text{W}^7$  is  $\text{N}(\text{R}^7)$ ;

10            R<sup>15</sup> is selected from the group consisting of hydrido, halo, alkyl, and  
haloalkyl;

R<sup>1</sup> and X<sup>0</sup> are independently selected from the group consisting of hydrogen, hydroxy, hydroxyamino, amidino, amino, cyano, hydroxyalkyl, alkoxy, alkylamino, aminoalkyl, alkylthio, alkoxyamino, haloalkyl, haloalkoxy, and deuterio;

$Z^0$  is a covalent single bond;

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$R^9$ ,  $R^{11}$ , and  $R^{13}$  are independently selected from the group consisting

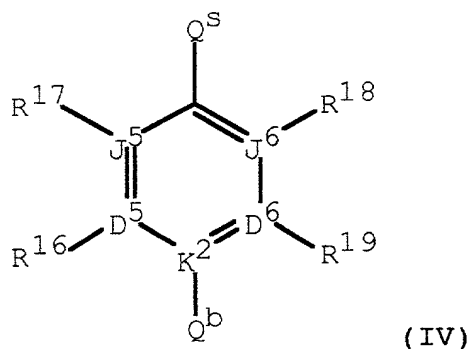
of hydrido, hydroxy, amino, amidino, guanidino, alkylamino, alkylthio, alkoxy, alkylsulfinyl, alkylsulfonyl, amidosulfonyl, monoalkyl amidosulfonyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, carboxy, carboxamido, and cyano;

- 5  $R^{10}$  and  $R^{12}$  are independently selected from the group consisting of hydrido, acetamido, haloacetamido, amidino, guanidino, alkyl, alkoxy, alkoxyamino, aminoalkyl, hydroxy, amino, alkylamino, alkylsulfonamido, amidosulfonyl, monoalkyl amidosulfonyl, dialkyl amidosulfonyl, hydroxyalkyl, aminoalkyl, halo, haloalkyl, carboalkoxy, carboxy, carboxyalkyl, carboxyamido, and cyano;

K is  $CH_2$ ;

$E^0$  is  $C(O)N(H)$ ;

$Y^0$  is formula (IV):



- 15 wherein  $D^5$ ,  $D^6$ ,  $J^5$ , and  $J^6$  are independently selected from the group consisting of C, N, O, S and a covalent bond with the provisos that no more than one is a covalent bond,  $K^2$  is C, no more than one of  $D^5$ ,  $D^6$ ,  $J^5$ , and  $J^6$  is O, no more than one of  $D^5$ ,  $D^6$ ,  $J^5$ , and  $J^6$  is S, one of  $D^5$ ,  $D^6$ ,  $J^5$ , and  $J^6$  must be a covalent bond when two of  $D^5$ ,  $D^6$ ,  $J^5$ , and  $J^6$  are O and S, and no more
- 20 than four of  $D^5$ ,  $D^6$ ,  $J^5$ , and  $J^6$  are N, with the provisos that  $R^{16}$ ,  $R^{17}$ ,  $R^{18}$ , and  $R^{19}$  are each independently selected to maintain the tetravalent nature of



carbon, trivalent nature of nitrogen, the divalent nature of sulfur, and the divalent nature of oxygen;

$R^{16}$ ,  $R^{17}$ ,  $R^{18}$ , and  $R^{19}$  are independently selected from the group

- 5 consisting of hydrido, amidino, guanidino, carboxy, haloalkylthio, alkoxy, hydroxy, amino, alkylamino, alkylthio, alkylsulfinyl, alkylsulfonyl, alkanoyl, haloalkanoyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, aminoalkyl, and cyano;

$R^{16}$  and  $R^{19}$  are optionally  $Q^b$  with the proviso that no more than one of  $R^{16}$  and  $R^{19}$  is  $Q^b$  at the same time and that  $Q^b$  is  $Q^{be}$ ;

$Q^b$  is selected from the group consisting of  $NR^{20}R^{21}$ ,  $Q^{be}$  wherein  $Q^{be}$  is

- 10 hydrido,  $N(R^{26})C(NR^{25})N(R^{23})(R^{24})$ , and  $C(NR^{25})NR^{23}R^{24}$ ;

$R^{20}$ ,  $R^{21}$ ,  $R^{23}$ ,  $R^{24}$ ,  $R^{25}$ , and  $R^{26}$  are independently selected from the group consisting of hydrido and alkyl;

$Q^s$  is  $CH_2$ .

- 15 In still another most preferred embodiment of compounds of Formula I or a pharmaceutically acceptable salt thereof,

J is O;

- B is selected from the group consisting of C3-C7 cycloalkyl and C4 heterocyclyl, wherein each ring carbon is optionally substituted with  $R^{33}$ , a ring carbon other than the ring carbon at the point of attachment of B to A is optionally substituted with oxo provided that no more than one ring carbon is substituted by oxo at the same time, ring carbons and nitrogens adjacent to the carbon at the point of attachment are optionally substituted with  $R^9$  or  $R^{13}$ , a ring carbon or nitrogen adjacent to the  $R^9$  position and two atoms from the point of attachment is optionally substituted with  $R^{10}$ , a ring carbon or nitrogen adjacent to the  $R^{13}$  position and two atoms from the point of attachment is optionally substituted with  $R^{12}$ , a ring carbon three atoms from the point of
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- 25

attachment and adjacent to the  $R^{10}$  position is optionally substituted with  $R^{11}$ ,  
 a ring carbon three atoms from the point of attachment and adjacent to the  $R^{12}$   
 position is optionally substituted with  $R^{33}$ , and a ring carbon four atoms from  
 the point of attachment and adjacent to the  $R^{11}$  and  $R^{33}$  positions is optionally  
 5 substituted with  $R^{34}$ ;

$R^9$ ,  $R^{11}$ , and  $R^{13}$  are independently selected from the group consisting  
 of hydrido, hydroxy, amino, amidino, guanidino, alkylamino, alkylthio, alkoxy,  
 alkylsulfinyl, alkylsulfonyl, amidosulfonyl, monoalkyl amidosulfonyl, alkyl,  
 halo, haloalkyl, haloalkoxy, hydroxyalkyl, carboxy, carboxamido, and cyano;  
 10  $R^{10}$  and  $R^{12}$  are independently selected from the group consisting of  
 hydrido, acetamido, haloacetamido, amidino, guanidino, alkyl, alkoxy,  
 alkoxyamino, aminoalkyl, hydroxy, amino, alkylamino, alkylsulfonamido,  
 amidosulfonyl, monoalkyl amidosulfonyl, dialkyl amidosulfonyl, hydroxyalkyl,  
 aminoalkyl, halo, haloalkyl, carboalkoxy, carboxy, carboxyalkyl, carboxyamido,  
 15 and cyano;

$R^{33}$  and  $R^{34}$  are independently selected from the group consisting of  
 hydrido, amidino, guanidino, alkoxy, hydroxy, amino, alkoxyamino,  
 alkylamino, alkylthio, amidosulfonyl, monoalkyl amidosulfonyl, dialkyl  
 amidosulfonyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, carboalkoxy,  
 20 carboxy, carboxamido, and cyano;

$R^{33}$  is optionally  $Q^b$ ;

A is selected from the group consisting of single covalent bond and  
 $(CH(R^{15}))_{pa}-(W^7)_{rr}$  wherein  $rr$  is an integer selected from 0 through 1,  $pa$  is  
 an integer selected from 0 through 3, and  $W^7$  is  $N(R^7)$ ;

25  $R^7$  is selected from the group consisting of hydrido, hydroxy and alkyl;  
 $R^{15}$  is selected from the group consisting of hydrido, halo, alkyl, and  
 haloalkyl;

$\Psi$  is NH;

$R^1$  and  $X^0$  are independently selected from the group consisting of hydrido, hydroxy, hydroxyamino, amidino, amino, cyano, hydroxyalkyl, alkoxy, alkyl, alkylamino, aminoalkyl, alkylthio, alkoxyamino, haloalkyl, haloalkoxy, and halo;

$R^2$  is  $Z^0-Q$ ;

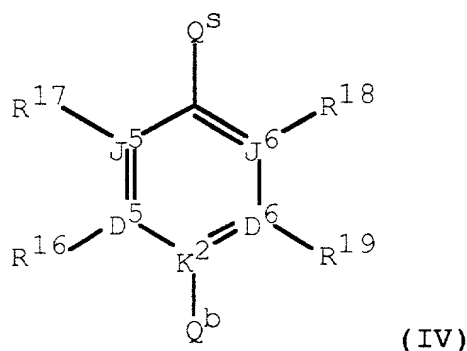
$Z^0$  is a covalent single bond;

Q is selected from the group consisting of aryl and heteroaryl wherein a carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^9$ , the other carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^{13}$ , a carbon adjacent to  $R^9$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{10}$ , a carbon adjacent to  $R^{13}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{12}$ , and any carbon adjacent to both  $R^{10}$  and  $R^{12}$  is optionally substituted by  $R^{11}$ ;

K is  $CH_2$ ;

$E^0$  is  $C(O)N(H)$ ;

$Y^0$  is formula (IV):



wherein  $D^5$ ,  $D^6$ ,  $J^5$ , and  $J^6$  are independently selected from the group consisting of C, N, O, S and a covalent bond with the provisos that no more

than one is a covalent bond,  $K^2$  is C, no more than one of  $D^5$ ,  $D^6$ ,  $J^5$ , and  $J^6$  is O, no more than one of  $D^5$ ,  $D^6$ ,  $J^5$ , and  $J^6$  is S, one of  $D^5$ ,  $D^6$ ,  $J^5$ , and  $J^6$  must be a covalent bond when two of  $D^5$ ,  $D^6$ ,  $J^5$ , and  $J^6$  are O and S, and no more than four of  $D^5$ ,  $D^6$ ,  $J^5$ , and  $J^6$  are N, with the provisos that  $R^{16}$ ,  $R^{17}$ ,  $R^{18}$ ,  
 5 and  $R^{19}$  are each independently selected to maintain the tetravalent nature of carbon, trivalent nature of nitrogen, the divalent nature of sulfur, and the divalent nature of oxygen;

$R^{16}$ ,  $R^{17}$ ,  $R^{18}$ , and  $R^{19}$  are independently selected from the group consisting of hydrido, amidino, guanidino, carboxy, haloalkylthio, alkoxy,  
 10 hydroxy, amino, alkylamino, alkylthio, alkylsulfinyl, alkylsulfonyl, alkanoyl, haloalkanoyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, alkylenylamino, and cyano;

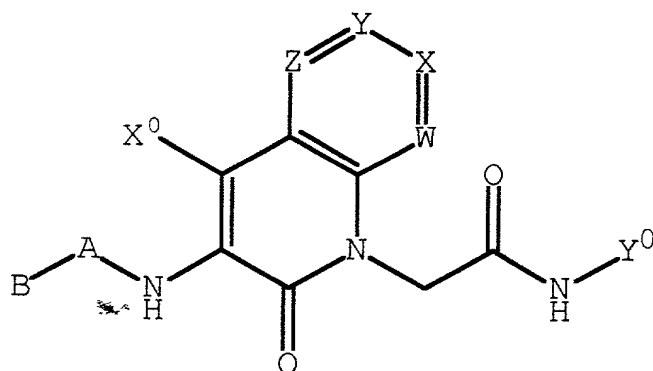
$R^{16}$  and  $R^{19}$  are optionally  $Q^b$  with the proviso that no more than one of  $R^{16}$  and  $R^{19}$  is  $Q^b$  at the same time and that  $Q^b$  is  $Q^{be}$ ;

15  $Q^b$  is selected from the group consisting of  $NR^{20}R^{21}$ ,  $Q^{be}$  wherein  $Q^{be}$  is hydrido, and  $C(NR^{25})NR^{23}R^{24}$ ;

$R^{20}$ ,  $R^{21}$ ,  $R^{23}$ ,  $R^{24}$ , and  $R^{25}$  are independently selected from the group consisting of hydrido and alkyl;

$Q^s$  is  $CH_2$ .

20 In a further most preferred embodiment of compounds of Formula I or a pharmaceutically acceptable salt thereof, said compound is the formula:



wherein;

- B is phenyl or a heteroaryl of 5 or 6 ring members, wherein a carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^{32}$ , the other carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^{36}$ , a carbon adjacent to  $R^{32}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{33}$ , a carbon adjacent to  $R^{36}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{35}$ , and any carbon adjacent to both  $R^{33}$  and  $R^{35}$  is optionally substituted by  $R^{34}$ ;

- $R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$  are independently selected from the group consisting of hydrido, acetamido, haloacetamido, amidino, guanidino, alkoxy, hydroxy, amino, alkoxyamino, alkylamino, alkylthio, amidosulfonyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, carboalkoxy, carboxy, carboxamido, cyano, and  $Q^b$ ;

- B is optionally selected from the group consisting of hydrido, C2-C8 alkyl, C3-C8 alkenyl, C3-C8 alkynyl, and C2-C8 haloalkyl, wherein each member of group B is optionally substituted at any carbon up to and including 6 atoms from the point of attachment of B to A with one or more of the group consisting of  $R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$ ;

B is optionally a C3-C7 cycloalkyl or C4-C6 saturated heterocyclyl, wherein each ring carbon is optionally substituted with  $R^{33}$ , a ring carbon other than the ring carbon at the point of attachment of B to A is optionally substituted with oxo provided that no more than one ring carbon is substituted by oxo at the same time, ring carbons and nitrogen adjacent to the carbon atom at the point of attachment are optionally substituted with  $R^9$  or  $R^{13}$ , a ring carbon or nitrogen adjacent to the  $R^9$  position and two atoms from the point of attachment is optionally substituted with  $R^{10}$ , a ring carbon or nitrogen adjacent to the  $R^{13}$  position and two atoms from the point of attachment is optionally substituted with  $R^{12}$ , a ring carbon or nitrogen three atoms from the point of attachment and adjacent to the  $R^{10}$  position is optionally substituted with  $R^{11}$ , a ring carbon or nitrogen three atoms from the point of attachment and adjacent to the  $R^{12}$  position is optionally substituted with  $R^{33}$ , and a ring carbon or nitrogen four atoms from the point of attachment and adjacent to the  $R^{11}$  and  $R^{33}$  positions is optionally substituted with  $R^{34}$ ;

$R^9$ ,  $R^{11}$ , and  $R^{13}$  are independently selected from the group consisting of hydrido, hydroxy, amino, amidino, guanidino, alkylamino, alkylthio, alkoxy, alkylsulfinyl, alkylsulfonyl, amidosulfonyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, carboxy, carboxamido, and cyano;

$R^{10}$  and  $R^{12}$  are independently selected from the group consisting of hydrido, acetamido, haloacetamido, amidino, guanidino, alkyl, alkoxy, alkoxyamino, hydroxy, amino, alkylamino, alkylsulfonamido, amidosulfonyl, hydroxyalkyl, aminoalkyl, halo, haloalkyl, carboalkoxy, carboxy, carboxamido, carboxyalkyl, and cyano;

A is a single covalent bond or  $(CH(R^{15}))_{pa}-(W^7)_{rr}$  wherein  $rr$  is 0 or 1,  $pa$  is an integer selected from 0 through 3, and  $W^7$  is  $N(R^7)$ ;

$R^7$  is selected from the group consisting of hydrido, hydroxy and alkyl;

$R^{15}$  is selected from the group consisting of hydrido, halo, alkyl, and haloalkyl;

$X^0$  is selected from the group consisting of hydrido, alkyl, cyano, halo,

- 5 haloalkyl, haloalkoxy, amino, aminoalkyl, alkylamino, amidino, hydroxy, hydroxyamino, alkoxy, hydroxyalkyl, alkoxyamino, thiol, and alkylthio;

W, X, Y, and Z are independently selected from the group consisting of  $C(R^9)$ ,  $C(R^{10})$ ,  $C(R^{11})$ ,  $C(R^{12})$ , and N with the proviso that no more than three of W, X, Y, and Z are N at the same time;

- 10  $Y^0$  is phenyl or a heteroaryl of 5 or 6 ring members, wherein one carbon of said phenyl or said heteroaryl is substituted by  $Q^s$ , a carbon two or three contiguous atoms from the point of attachment of  $Q^s$  is substituted by  $Q^b$ , a carbon adjacent to the point of attachment of  $Q^s$  is optionally substituted by  $R^{17}$ , another carbon adjacent to the point of attachment of  $Q^s$  is optionally substituted by  $R^{18}$ , a carbon adjacent to  $Q^b$  is optionally substituted by  $R^{16}$ , and another carbon adjacent to  $Q^b$  is optionally substituted by  $R^{19}$ ;

- 15  $R^{16}$ ,  $R^{17}$ ,  $R^{18}$ , and  $R^{19}$  are independently selected from the group consisting of hydrido, amidino, guanidino, carboxy, haloalkylthio, alkoxy, hydroxy, amino, alkylamino, alkylthio, alkylsulfinyl, alkylsulfonyl, alkanoyl, haloalkanoyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, aminoalkyl, and cyano;

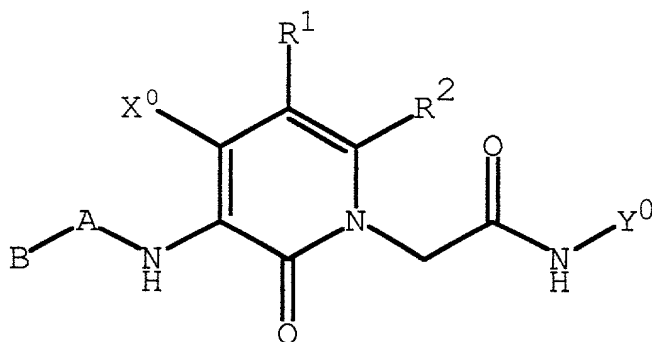
$R^{16}$  or  $R^{19}$  is optionally selected from the group consisting of  $NR^{20}R^{21}$ ,  $N(R^{26})C(NR^{25})N(R^{23})(R^{24})$ , and  $C(NR^{25})NR^{23}R^{24}$ , with the proviso that  $R^{16}$ ,  $R^{19}$ , and  $Q^b$  are not simultaneously hydrido;

$Q^b$  is selected from the group consisting of  $NR^{20}R^{21}$ , hydrido,  $N(R^{26})C(NR^{25})N(R^{23})(R^{24})$ , and  $C(NR^{25})NR^{23}R^{24}$ ;

$R^{20}$ ,  $R^{21}$ ,  $R^{23}$ ,  $R^{24}$ ,  $R^{25}$ , and  $R^{26}$  are independently hydrido or alkyl;

$Q^s$  is  $CH_2$ .

- 5 In a fifth most preferred embodiment of compounds of Formula I or a pharmaceutically acceptable salt thereof, said compound is the formula:



wherein;

- 10 B is phenyl or a heteroaryl of 5 or 6 ring members, wherein a carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^{32}$ , the other carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^{36}$ , a carbon adjacent to  $R^{32}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{33}$ , a carbon adjacent to  $R^{36}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{35}$ , and any carbon adjacent to both  $R^{33}$  and  $R^{35}$  is optionally substituted by  $R^{34}$ ;

- 15  $R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$  are independently selected from the group consisting of hydrido, acetamido, haloacetamido, amidino, guanidino, alkoxy, hydroxy, amino, alkoxyamino, alkylamino, alkylthio, amidosulfonyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, carboalkoxy, carboxy, carboxamido, cyano, and  $Q^b$ ;
- 20



A is a single covalent bond or  $(\text{CH}(\text{R}^{15}))_{\text{pa}}-(\text{W}^7)_{\text{rr}}$  wherein rr is 0 or 1, pa is an integer selected from 0 through 3, and  $\text{W}^7$  is  $\text{N}(\text{R}^7)$ ;

$\text{R}^7$  is hydrido or alkyl;

$\text{R}^{15}$  is selected from the group consisting of hydrido, halo, alkyl, and haloalkyl;

$\text{R}^1$  and  $\text{X}^0$  are independently selected from the group consisting of hydrido, hydroxy, hydroxyamino, amidino, amino, cyano, hydroxyalkyl, alkoxy, alkyl, alkylamino, aminoalkyl, alkylthio, alkoxyamino, haloalkyl, haloalkoxy, and halo;

$\text{R}^2$  is  $\text{Z}^0\text{-Q}$ ;

$\text{Z}^0$  is a covalent single bond or  $\text{W}^0-(\text{CH}_2)_p$  wherein p is 0 or 1 and  $\text{W}^0$  is selected from the group consisting of O, S, and  $\text{N}(\text{H})$ ;

Q is phenyl or a heteroaryl of 5 or 6 ring members, wherein a carbon adjacent to the carbon at the point of attachment is optionally substituted by  $\text{R}^9$ , the other carbon adjacent to the carbon at the point of attachment is optionally substituted by  $\text{R}^{13}$ , a carbon adjacent to  $\text{R}^9$  and two atoms from the carbon at the point of attachment is optionally substituted by  $\text{R}^{10}$ , a carbon adjacent to  $\text{R}^{13}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $\text{R}^{12}$ , and any carbon adjacent to both  $\text{R}^{10}$  and  $\text{R}^{12}$  is optionally substituted by  $\text{R}^{11}$ , with the proviso that Q is other than a phenyl when  $\text{Z}^0$  is a covalent single bond;

$\text{R}^9$ ,  $\text{R}^{11}$ , and  $\text{R}^{13}$  are independently selected from the group consisting of hydrido, hydroxy, amino, amidino, guanidino, alkylamino, alkylthio, alkoxy, alkylsulfinyl, alkylsulfonyl, amidosulfonyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, carboxy, carboxamido, and cyano;

$R^{10}$  and  $R^{12}$  are independently selected from the group consisting of hydrido, acetamido, haloacetamido, amidino, guanidino, alkyl, alkoxy, alkoxyamino, hydroxy, amino, alkylamino, alkylsulfonamido, amidosulfonyl, hydroxyalkyl, aminoalkyl, halo, haloalkyl, carboalkoxy, carboxy, carboxamido, carboxyalkyl, and cyano;

$Y^0$  is phenyl or a heteroaryl of 5 or 6 ring members, wherein one carbon of said phenyl or said heteroaryl is substituted by  $Q^s$ , a carbon two or three contiguous atoms from the point of attachment of  $Q^s$  is substituted by  $Q^b$ , a carbon adjacent to the point of attachment of  $Q^s$  is optionally substituted by  $R^{17}$ , another carbon adjacent to the point of attachment of  $Q^s$  is optionally substituted by  $R^{18}$ , a carbon adjacent to  $Q^b$  is optionally substituted by  $R^{16}$ , and another carbon adjacent to  $Q^b$  is optionally substituted by  $R^{19}$ ;

$R^{16}$ ,  $R^{17}$ ,  $R^{18}$ , and  $R^{19}$  are independently selected from the group consisting of hydrido, amidino, guanidino, carboxy, haloalkylthio, alkoxy, hydroxy, amino, alkylamino, alkylthio, alkylsulfinyl, alkylsulfonyl, alkanoyl, haloalkanoyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, aminoalkyl, and cyano;

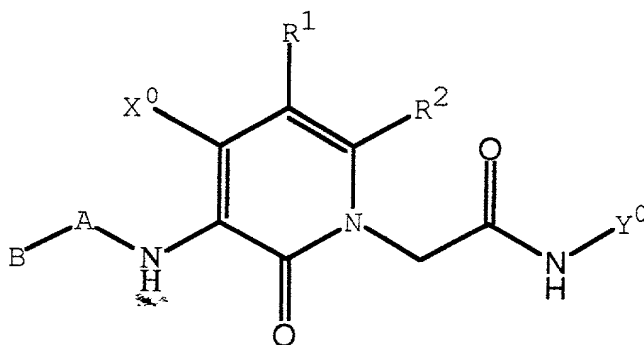
$R^{16}$  or  $R^{19}$  is optionally  $NR^{20}R^{21}$  or  $C(NR^{25})NR^{23}R^{24}$ , with the proviso that  $R^{16}$ ,  $R^{19}$ , and  $Q^b$  are not simultaneously hydrido;

$Q^b$  is selected from the group consisting of  $NR^{20}R^{21}$ , hydrido, and  $C(NR^{25})NR^{23}R^{24}$ ;

$R^{20}$ ,  $R^{21}$ ,  $R^{23}$ ,  $R^{24}$ , and  $R^{25}$  are independently hydrido or alkyl;

$Q^s$  is  $CH_2$ .

In a sixth most preferred embodiment of compounds of Formula I or a pharmaceutically acceptable salt thereof, said compound is the formula:



wherein;

B is selected from the group consisting of hydrido, C2-C8 alkyl, C3-C8 alkenyl, C3-C8 alkynyl, and C2-C8 haloalkyl, wherein each member of group B  
 5 is optionally substituted at any carbon up to and including 6 atoms from the point of attachment of B to A with one or more of the group consisting of  $R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$ ;

$R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$  are independently selected from the group consisting of hydrido, acetamido, haloacetamido, amidino, guanidino,  
 10 alkoxy, hydroxy, amino, alkoxyamino, alkylamino, alkylthio, amidosulfonyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, carboalkoxy, carboxy, carboxamido, cyano, and  $Q^b$ ;

A is a single covalent bond or  $(CH(R^{15}))_{pa}-(W^7)_{rr}$  wherein  $rr$  is 0 or 1,  $pa$  is an integer selected from 0 through 3, and  $W^7$  is  $N(R^7)$ ;

15  $R^7$  is hydrido or alkyl;

$R^{15}$  is selected from the group consisting of hydrido, halo, alkyl, and haloalkyl;

$R^1$  and  $X^0$  are independently selected from the group consisting of hydrido, hydroxy, hydroxyamino, amidino, amino, cyano, hydroxyalkyl, alkoxy,  
 20 alkyl, alkylamino, aminoalkyl, alkylthio, alkoxyamino, haloalkyl, haloalkoxy, and halo;

$R^2$  is  $Z^0-Q$ ;

$Z^0$  is a covalent single bond or  $W^0-(CH_2)_p$  wherein  $p$  is 0 or 1 and  $W^0$  is selected from the group consisting of O, S, and N(H);

Q is phenyl or a heteroaryl of 5 or 6 ring members, wherein a carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^9$ ,  
 5 the other carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^{13}$ , a carbon adjacent to  $R^9$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{10}$ , a carbon adjacent to  $R^{13}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{12}$ , and any carbon adjacent to both  $R^{10}$  and  $R^{12}$  is optionally  
 10 substituted by  $R^{11}$ , with the proviso that Q is other than a phenyl when  $Z^0$  is a covalent single bond;

$R^9$ ,  $R^{11}$ , and  $R^{13}$  are independently selected from the group consisting of hydrido, hydroxy, amino, amidino, guanidino, alkylamino, alkylthio, alkoxy, alkylsulfinyl, alkylsulfonyl, amidosulfonyl, alkyl, halo, haloalkyl, haloalkoxy,  
 15 hydroxyalkyl, carboxy, carboxamido, and cyano;

$R^{10}$  and  $R^{12}$  are independently selected from the group consisting of hydrido, acetamido, haloacetamido, amidino, guanidino, alkyl, alkoxy, alkoxyamino, hydroxy, amino, alkylamino, alkylsulfonamido, amidosulfonyl, hydroxyalkyl, aminoalkyl, halo, haloalkyl, carboalkoxy, carboxy, carboxamido,  
 20 carboxyalkyl, and cyano;

$Y^0$  is phenyl or a heteroaryl of 5 or 6 ring members, wherein one carbon of said phenyl or said heteroaryl is substituted by  $Q^s$ , a carbon two or three contiguous atoms from the point of attachment of  $Q^s$  is substituted by  $Q^b$ , a carbon adjacent to the point of attachment of  $Q^s$  is optionally substituted by  
 25  $R^{17}$ , another carbon adjacent to the point of attachment of  $Q^s$  is optionally

substituted by  $R^{18}$ , a carbon adjacent to  $Q^b$  is optionally substituted by  $R^{16}$ ,  
and another carbon adjacent to  $Q^b$  is optionally substituted by  $R^{19}$ ;

$R^{16}$ ,  $R^{17}$ ,  $R^{18}$ , and  $R^{19}$  are independently selected from the group

- consisting of hydrido, amidino, guanidino, carboxy, haloalkylthio, alkoxy,  
5 hydroxy, amino, alkylamino, alkylthio, alkylsulfinyl, alkylsulfonyl, alkanoyl,  
haloalkanoyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, aminoalkyl, and  
cyano;

$R^{16}$  or  $R^{19}$  is optionally selected from the group consisting of  $NR^{20}R^{21}$ ,  
 $N(R^{26})C(NR^{25})N(R^{23})(R^{24})$ , and  $C(NR^{25})NR^{23}R^{24}$ , with the proviso that  $R^{16}$ ,

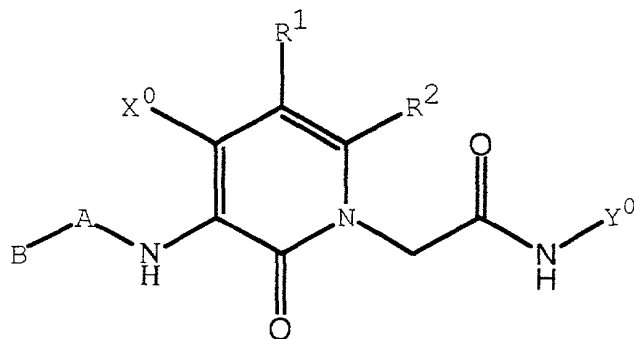
- 10  $R^{19}$ , and  $Q^b$  are not simultaneously hydrido;

$Q^b$  is selected from the group consisting of  $NR^{20}R^{21}$ , hydrido,  
 $N(R^{26})C(NR^{25})N(R^{23})(R^{24})$ , and  $C(NR^{25})NR^{23}R^{24}$ ;

$R^{20}$ ,  $R^{21}$ ,  $R^{23}$ ,  $R^{24}$ ,  $R^{25}$ , and  $R^{26}$  are independently selected from the  
group consisting of hydrido and alkyl;

- 15  $Q^s$  is  $CH_2$ .

In a seventh most preferred embodiment of compounds of Formula I or  
a pharmaceutically acceptable salt thereof, said compound is the formula:



wherein;

- 20 B is a C3-C7 cycloalkyl or a C4-C6 saturated heterocyclyl, wherein  
each ring carbon is optionally substituted with  $R^{33}$ , a ring carbon other than the

ring carbon at the point of attachment of B to A is optionally substituted with oxo provided that no more than one ring carbon is substituted by oxo at the same time, ring carbons and a nitrogen adjacent to the carbon atom at the point of attachment are optionally substituted with  $R^9$  or  $R^{13}$ , a ring carbon or

- 5 nitrogen adjacent to the  $R^9$  position and two atoms from the point of attachment is optionally substituted with  $R^{10}$ , a ring carbon or nitrogen adjacent to the  $R^{13}$  position and two atoms from the point of attachment is optionally substituted with  $R^{12}$ , a ring carbon or nitrogen three atoms from the point of attachment and adjacent to the  $R^{10}$  position is optionally substituted with  $R^{11}$ , a ring
- 10 carbon or nitrogen three atoms from the point of attachment and adjacent to the  $R^{12}$  position is optionally substituted with  $R^{33}$ , and a ring carbon or nitrogen four atoms from the point of attachment and adjacent to the  $R^{11}$  and  $R^{33}$  positions is optionally substituted with  $R^{34}$ ;

- $R^9$ ,  $R^{11}$ , and  $R^{13}$  are independently selected from the group consisting
- 15 of hydrido, hydroxy, amino, amidino, guanidino, alkylamino, alkylthio, alkoxy, alkylsulfinyl, alkylsulfonyl, amidosulfonyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, carboxy, carboxamido, and cyano;

- $R^{10}$  and  $R^{12}$  are independently selected from the group consisting of
- hydrido, acetamido, haloacetamido, amidino, guanidino, alkyl, alkoxy,
- 20 alkoxyamino, hydroxy, amino, alkylamino, alkylsulfonamido, amidosulfonyl, hydroxyalkyl, aminoalkyl, halo, haloalkyl, carboalkoxy, carboxy, carboxamido, carboxyalkyl, and cyano;

- $R^{33}$  and  $R^{34}$  are independently selected from the group consisting of
- hydrido, acetamido, haloacetamido, amidino, guanidino, alkoxy, hydroxy, amino,
- 25 alkoxyamino, alkylamino, alkylthio, amidosulfonyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, carboalkoxy, carboxy, carboxamido, and cyano;

$R^{33}$  is optionally  $Q^b$ ;

A is a single covalent bond or  $(\text{CH}(\text{R}^{15}))_{\text{pa}}-(\text{W}^7)_{\text{rr}}$  wherein rr is 0 or 1, pa is an integer selected from 0 through 3, and  $\text{W}^7$  is  $\text{N}(\text{R}^7)$ ;

$\text{R}^7$  is hydrido or alkyl;

$\text{R}^{15}$  is selected from the group consisting of hydrido, halo, alkyl, and haloalkyl;

$\text{R}^1$  and  $\text{X}^{\text{O}}$  are independently selected from the group consisting of hydrido, hydroxy, hydroxyamino, amidino, amino, cyano, hydroxyalkyl, alkoxy, alkyl, alkylamino, aminoalkyl, alkylthio, alkoxyamino, haloalkyl, haloalkoxy, and halo;

$\text{R}^2$  is  $\text{Z}^0\text{-Q}$ ;

$\text{Z}^0$  is a covalent single bond or  $\text{W}^0-(\text{CH}_2)_p$  wherein p is 0 or 1 and  $\text{W}^0$  is selected from the group consisting of O, S, and  $\text{N}(\text{H})$ ;

Q is phenyl or a heteroaryl of 5 or 6 ring members, wherein a carbon adjacent to the carbon at the point of attachment is optionally substituted by  $\text{R}^9$ , the other carbon adjacent to the carbon at the point of attachment is optionally substituted by  $\text{R}^{13}$ , a carbon adjacent to  $\text{R}^9$  and two atoms from the carbon at the point of attachment is optionally substituted by  $\text{R}^{10}$ , a carbon adjacent to  $\text{R}^{13}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $\text{R}^{12}$ , and any carbon adjacent to both  $\text{R}^{10}$  and  $\text{R}^{12}$  is optionally substituted by  $\text{R}^{11}$ , with the proviso that Q is other than a phenyl when  $\text{Z}^0$  is a covalent single bond;

$\text{Y}^0$  is phenyl or a heteroaryl of 5 or 6 ring members, wherein one carbon of said phenyl or said heteroaryl is substituted by  $\text{Q}^{\text{S}}$ , a carbon two or three contiguous atoms from the point of attachment of  $\text{Q}^{\text{S}}$  is substituted by  $\text{Q}^{\text{b}}$ , a carbon adjacent to the point of attachment of  $\text{Q}^{\text{S}}$  is optionally substituted by

$R^{17}$ , another carbon adjacent to the point of attachment of  $Q^s$  is optionally substituted by  $R^{18}$ , a carbon adjacent to  $Q^b$  is optionally substituted by  $R^{16}$ , and another carbon adjacent to  $Q^b$  is optionally substituted by  $R^{19}$ ;

$R^{16}$ ,  $R^{17}$ ,  $R^{18}$ , and  $R^{19}$  are independently selected from the group

- 5 consisting of hydrido, amidino, guanidino, carboxy, haloalkylthio, alkoxy, hydroxy, amino, alkylamino, alkylthio, alkylsulfinyl, alkylsulfonyl, alkanoyl, haloalkanoyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, aminoalkyl, and cyano;

$R^{16}$  or  $R^{19}$  is optionally  $NR^{20}R^{21}$  or  $C(NR^{25})NR^{23}R^{24}$ , with the

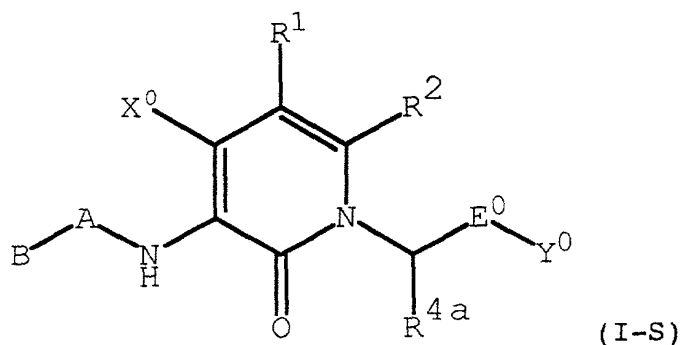
- 10 proviso that  $R^{16}$ ,  $R^{19}$ , and  $Q^b$  are not simultaneously hydrido;

$Q^b$  is selected from the group consisting of  $NR^{20}R^{21}$ , hydrido, and  $C(NR^{25})NR^{23}R^{24}$ ;

$R^{20}$ ,  $R^{21}$ ,  $R^{23}$ ,  $R^{24}$ , and  $R^{25}$  are independently hydrido or alkyl;

$Q^s$  is  $CH_2$ .

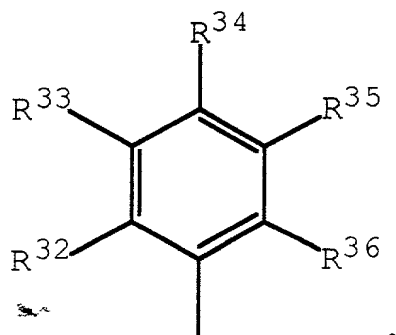
- 15 In a preferred specific embodiment of Formula I, compounds have the Formula I-S:



or a pharmaceutically acceptable salt thereof, wherein;

B is the Formula:





R<sup>32</sup>, R<sup>33</sup>, R<sup>34</sup>, R<sup>35</sup>, and R<sup>36</sup> are independently selected from the

- group consisting of hydrido, amidino, guanidino, carboxy, methyl, ethyl, isopropyl, propyl, methoxy, ethoxy, isopropoxy, propoxy, hydroxy, amino, methoxyamino, ethoxyamino, acetamido, trifluoroacetamido, nitro, aminomethyl, 1-aminoethyl, 2-aminoethyl, N-methylamino, dimethylamino, N-ethylamino, methylthio, ethylthio, isopropylthio, trifluoromethylthio, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, 2,2,3,3,3-pentafluoropropyl, trifluoromethoxy, 1,1,2,2-tetrafluoroethoxy, fluoro, chloro, bromo, amidosulfonyl, N-methylamidodisulfonyl, N,N-dimethylamidodisulfonyl, acetyl, propanoyl, trifluoroacetyl, pentafluoropropanoyl, hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl, 2,2,2-trifluoro-1-hydroxyethyl, 2,2,2-trifluoro-1-trifluoromethyl-1-hydroxyethyl, carboxymethyl, methoxycarbonyl, ethoxycarbonyl, amidocarbonyl, N-methylamidocarbonyl, N,N-dimethylamidocarbonyl, cyano, and Q<sup>b</sup>;

- B is selected from the group consisting of hydrido, trimethylsilyl, ethyl, 2-propenyl, 2-propynyl, propyl, isopropyl, butyl, 2-butenyl, 3-butenyl, 2-butylnyl, sec-butyl, *tert*-butyl, isobutyl, 2-methylpropenyl, 1-pentyl, 2-pentenyl, 3-pentenyl, 4-pentenyl, 2-pentylnyl, 3-pentylnyl, 2-pentyl, 1-methyl-2-butenyl, 1-methyl-3-butenyl, 1-methyl-2-butylnyl, 3-pentyl, 1-ethyl-2-propenyl, 2-methylbutyl, 2-methyl-2-butenyl, 2-methyl-3-butenyl, 2-methyl-3-butylnyl, 3-methylbutyl, 3-methyl-2-butenyl, 3-methyl-3-butenyl, 1-hexyl, 2-hexenyl, 3-hexenyl, 4-hexenyl, 5-hexenyl, 2-hexynyl, 3-hexynyl, 4-hexynyl, 2-hexyl, 1-methyl-2-pentenyl, 1-methyl-3-pentenyl, 1-methyl-4-pentenyl, 1-methyl-2-pentylnyl, 1-methyl-3-pentylnyl, 3-hexyl, 1-ethyl-2-butenyl, 1-ethyl-3-butenyl, 1-propyl-2-propenyl, 1-ethyl-2-butylnyl, 1-heptyl, 2-heptenyl, 3-heptenyl, 4-heptenyl, 5-heptenyl, 6-heptenyl, 2-heptylnyl, 3-heptylnyl, 4-heptylnyl, 5-

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- 20 B is optionally selected from the group consisting of cyclopropyl, cyclobutyl, oxetan-2-yl, oxetan-3-yl, azetidin-1-yl, azetidin-2-yl, azetidin-3-yl, thiaetan-2-yl, thiaetan-3-yl, cyclopentyl, cyclohexyl, adamantyl, norbornyl, 3-trifluoromethylnorbornyl, bicyclo[3.1.0]hexan-6-yl, cycloheptyl, and cyclooctyl, wherein each ring carbon is optionally substituted with  $R^{33}$ , ring carbons or a
- 25 nitrogen adjacent to the carbon atom at the point of attachment are optionally substituted with  $R^9$  or  $R^{13}$ , a ring carbon or a nitrogen adjacent to the  $R^9$  position and two atoms from the point of attachment is optionally substituted with  $R^{10}$ , and a ring carbon or a nitrogen adjacent to the  $R^{13}$  position and two atoms from the point of attachment is optionally substituted with  $R^{12}$ ;
- 30  $R^9$ ,  $R^{10}$ ,  $R^{11}$ ,  $R^{12}$ , and  $R^{13}$  are independently selected from the group consisting of hydrido, amidino, guanidino, carboxy, carboxymethyl, methyl,

- ethyl, isopropyl, propyl, methoxy, ethoxy, isopropoxy, propoxy, hydroxy, amino, methoxyamino, ethoxyamino, acetamido, trifluoroacetamido, nitro, aminomethyl, 1-aminoethyl, 2-aminoethyl, N-methylamino, dimethylamino, N-ethylamino, methylthio, ethylthio, isopropylthio, trifluoromethylthio,
- 5 trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, 2,2,3,3,3-pentafluoropropyl, trifluoromethoxy, 1,1,2,2-tetrafluoroethoxy, fluoro, chloro, bromo, methanesulfonamido, amidosulfonyl, N-methylamidosulfonyl, N,N-dimethylamidosulfonyl, acetyl, propanoyl, trifluoroacetyl, pentafluoropropanoyl, hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl, 2,2,2-trifluoro-1-
- 10 hydroxyethyl, 2,2,2-trifluoro-1-trifluoromethyl-1-hydroxyethyl, carboxymethyl, methoxycarbonyl, ethoxycarbonyl, amidocarbonyl, N-methylamidocarbonyl, N,N-dimethylamidocarbonyl, and cyano;

A is selected from the group consisting of single covalent bond, O, S, NH, N(CH<sub>3</sub>), N(OH), C(O), CH<sub>2</sub>, CH<sub>3</sub>CH, CF<sub>3</sub>CH, NHC(O), N(CH<sub>3</sub>)C(O),

- 15 C(O)NH, C(O)N(CH<sub>3</sub>), CF<sub>3</sub>CC(O), C(O)CCH<sub>3</sub>, C(O)CCF<sub>3</sub>, CH<sub>2</sub>C(O), (O)CCH<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>, CH<sub>3</sub>CHCH<sub>2</sub>, CF<sub>3</sub>CHCH<sub>2</sub>, CH<sub>3</sub>CC(O)CH<sub>2</sub>, CF<sub>3</sub>CC(O)CH<sub>2</sub>, CH<sub>2</sub>C(O)CCH<sub>3</sub>, CH<sub>2</sub>C(O)CCF<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>C(O), and CH<sub>2</sub>(O)CCH<sub>2</sub>;

A is optionally selected from the group consisting of CH<sub>2</sub>N(CH<sub>3</sub>),

- 20 CH<sub>2</sub>N(CH<sub>2</sub>CH<sub>3</sub>), CH<sub>2</sub>CH<sub>2</sub>N(CH<sub>3</sub>), and CH<sub>2</sub>CH<sub>2</sub>N(CH<sub>2</sub>CH<sub>3</sub>) with the proviso that B is hydrido;

- R<sup>1</sup> and X<sup>O</sup> are independently selected from the group consisting of hydrido, hydroxy, amino, thiol, amidino, hydroxyamino, aminomethyl, 1-aminoethyl, 2-aminoethyl, methylamino, dimethylamino, cyano, methyl, ethyl,
- 25 isopropyl, propyl, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, 2,2,3,3,3-pentafluoropropyl, methoxy, ethoxy, propoxy, hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl, methoxyamino, ethoxyamino, methylthio, ethylthio, trifluoromethoxy, 1,1,2,2-tetrafluoroethoxy, fluoro, chloro, and bromo;

R<sup>2</sup> is Z<sup>O</sup>-Q;

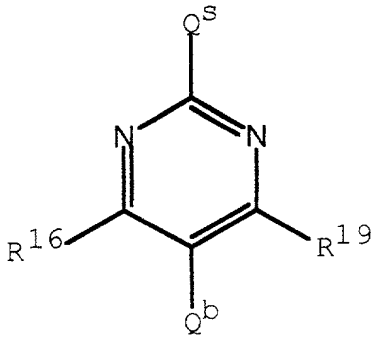
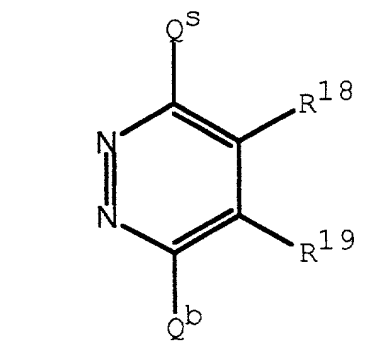
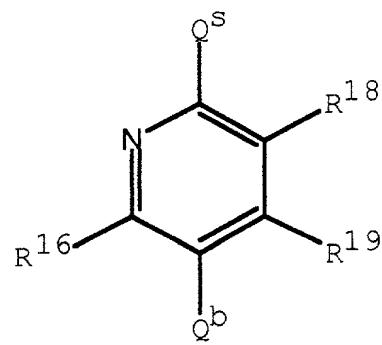
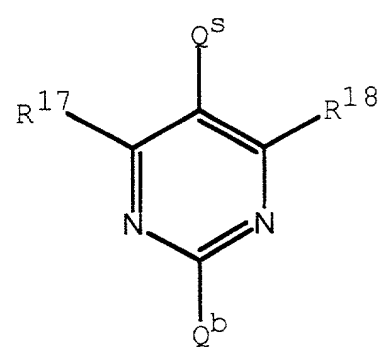
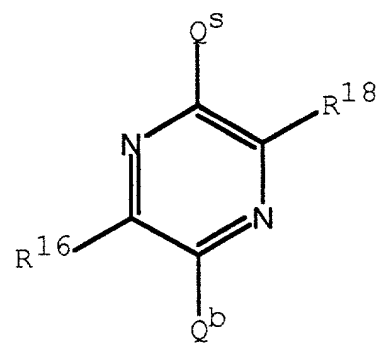
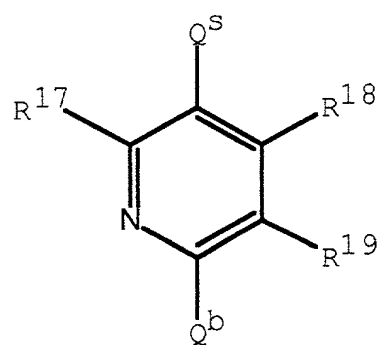
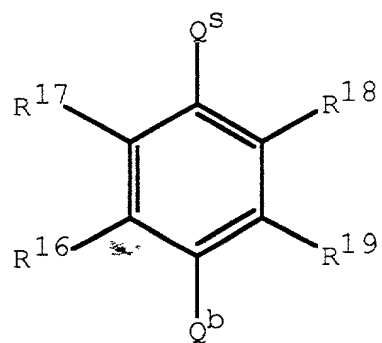
$Z^0$  is selected from the group consisting of covalent single bond, O, S, NH, CH<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>, CH(OH), CH(NH<sub>2</sub>), CH<sub>2</sub>CH(OH), CH<sub>2</sub>CHNH<sub>2</sub>, CH(OH)CH<sub>2</sub>, and CH(NH<sub>2</sub>)CH<sub>2</sub>;

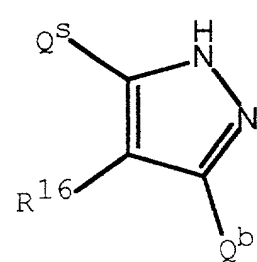
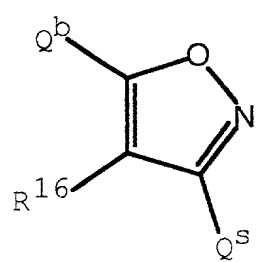
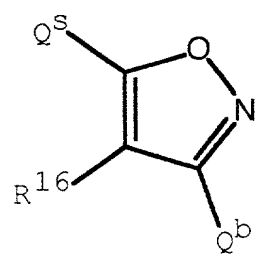
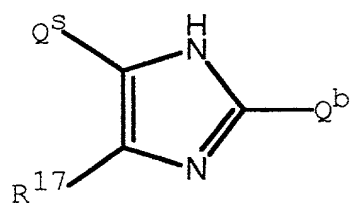
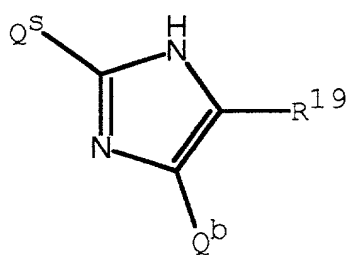
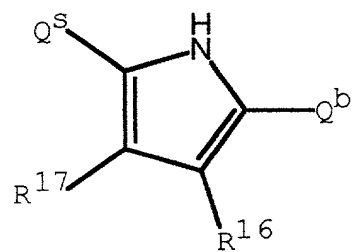
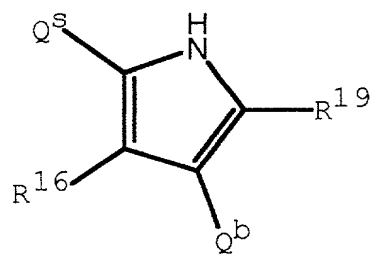
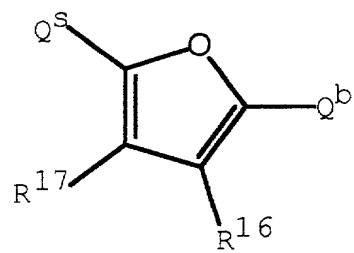
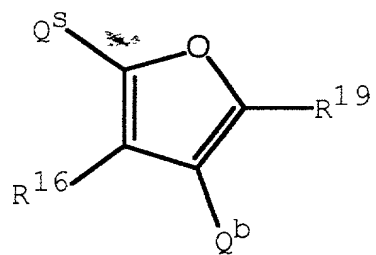
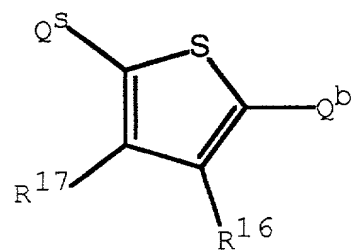
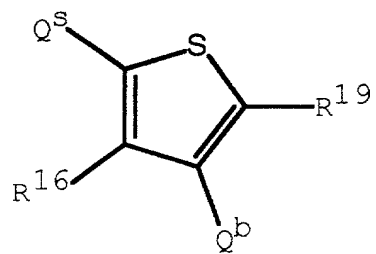
Q is selected from the group consisting of phenyl, 2-thienyl, 3-thienyl, 2-furyl, 3-furyl, 2-pyrrolyl, 3-pyrrolyl, 2-imidazolyl, 4-imidazolyl, 3-pyrazolyl, 4-pyrazolyl, 1,2,4-triazol-3-yl, 1,2,4-triazol-5-yl, 1,2,4-oxadiazol-3-yl, 1,2,4-oxadiazol-5-yl, 1,3,4-oxadiazol-3-yl, 1,3,4-oxadiazol-5-yl, 3-isothiazolyl, 5-isothiazolyl, 2-oxazolyl, 2-thiazolyl, 3-isoxazolyl, 5-isoxazolyl, 2-pyridyl, 3-pyridyl, 4-pyridyl, 2-pyrazinyl, 2-pyrimidinyl, 4-pyrimidinyl, 5-pyrimidinyl, 3-pyridazinyl, 4-pyridazinyl, 1,3,5-triazin-2-yl, 1,2,4-triazin-3-yl, 1,2,4-triazin-5-yl, 1,2,4-triazin-6-yl, 1,2,3-triazin-4-yl, and 1,2,3-triazin-5-yl, wherein a carbon adjacent to the carbon at the point of attachment is optionally substituted by R<sup>9</sup>, the other carbon adjacent to the carbon at the point of attachment is optionally substituted by R<sup>13</sup>, a carbon adjacent to R<sup>9</sup> and two atoms from the carbon at the point of attachment is optionally substituted by R<sup>10</sup>, a carbon adjacent to R<sup>13</sup> and two atoms from the carbon at the point of attachment is optionally substituted by R<sup>12</sup>, and any carbon adjacent to both R<sup>10</sup> and R<sup>12</sup> is optionally substituted by R<sup>11</sup>;

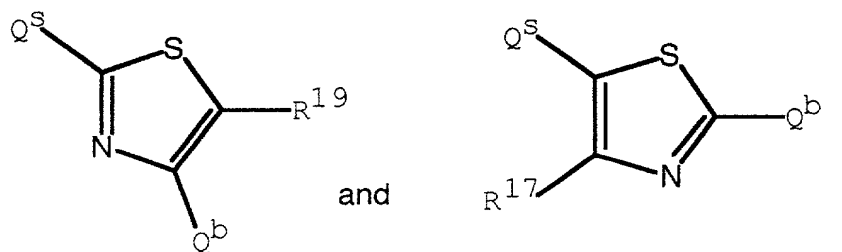
K is CHR<sup>4a</sup> wherein R<sup>4a</sup> is selected from the group consisting of methyl, ethyl, propyl, isopropyl, hydroxymethyl, 1-hydroxyethyl, methoxymethyl, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoromethyl, methylthiomethyl, and hydrido;

E<sup>0</sup> is a covalent single bond, C(O)N(H), (H)NC(O), and S(O)<sub>2</sub>N(H);

$Y^0$  is selected from the group of formulas consisting of:







$R^{16}$ ,  $R^{17}$ ,  $R^{18}$ , and  $R^{19}$  are independently selected from the group

- consisting of hydrido, methyl, ethyl, isopropyl, propyl, amidino, guanidino, carboxy, methoxy, ethoxy, isopropoxy, propoxy, hydroxy, amino, methoxyamino, ethoxyamino, aminomethyl, 1-aminoethyl, 2-aminoethyl, N-N-methylamino, dimethylamino, N-ethylamino, methylthio, ethylthio, isopropylthio, trifluoromethylthio, methylsulfinyl, ethylsulfinyl, methylsulfonyl, ethylsulfonyl, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, 2,2,3,3,3-pentafluoropropyl, trifluoromethoxy, 1,1,2,2-tetrafluoroethoxy, fluoro, chloro, bromo, amidosulfonyl, N-methylamidulosulfonyl, N,N-dimethylamidulosulfonyl, acetyl, propanoyl, trifluoroacetyl, pentafluoropropanoyl, hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl, 2,2,2-trifluoro-1-hydroxyethyl, and cyano;

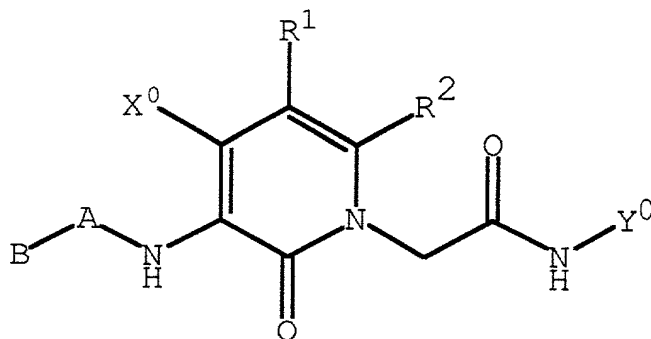
$R^{16}$  and  $R^{19}$  are optionally  $Q^b$  with the proviso that no more than one of  $R^{16}$  and  $R^{19}$  is  $Q^b$  at the same time and that  $Q^b$  is  $Q^{be}$ ;

- $Q^b$  is selected from the group consisting of  $NR^{20}R^{21}$ ,  $Q^{be}$  wherein  $Q^{be}$  is hydrido,  $C(NR^{25})NR^{23}R^{24}$  and  $N(R^{26})C(NR^{25})N(R^{23})(R^{24})$ , with the proviso that no more than one of  $R^{20}$  and  $R^{21}$  is hydroxy, N-methylamino, and N,N-dimethylamino at the same time and that no more than one of  $R^{23}$  and  $R^{24}$  is hydroxy, N-methylamino, and N,N-dimethylamino at the same time;

$R^{20}$ ,  $R^{21}$ ,  $R^{23}$ ,  $R^{24}$ ,  $R^{25}$ , and  $R^{26}$  are independently selected from the group consisting of hydrido, methyl, ethyl, propyl, butyl, isopropyl, hydroxy, 2-aminoethyl, 2-(N-methylamino)ethyl, and 2-(N,N-dimethylamino)ethyl;

- $Q^s$  is selected from the group consisting of a single covalent bond,  $CH_2$ ,  $CH_2CH_2$ ,  $CH_3CH$ ,  $CF_3CH$ ,  $CH_3CHCH_2$ ,  $CF_3CHCH_2$ ,  $CH_2(CH_3)CH$ ,  $CH=CH$ ,  $CF=CH$ ,  $C(CH_3)=CH$ ,  $CH=CHCH_2$ ,  $CF=CHCH_2$ ,  $C(CH_3)=CHCH_2$ ,  $CH_2CH=CH$ ,  $CH_2CF=CH$ ,  $CH_2C(CH_3)=CH$ ,  
 5  $CH_2CH=CHCH_2$ ,  $CH_2CF=CHCH_2$ ,  $CH_2C(CH_3)=CHCH_2$ ,  $CH_2CH=CHCH_2CH_2$ ,  $CH_2CF=CHCH_2CH_2$ , and  $CH_2C(CH_3)=CHCH_2CH_2$ .

In a more preferred specific embodiment of Formula I, compounds have the Formula I-MPS wherein B is an aromatic:



- 10 (I-MPS wherein B is aromatic)  
 or a pharmaceutically acceptable salt thereof, wherein;  
 B is selected from the group consisting of phenyl, 2-thienyl, 3-thienyl, 2-furyl, 3-furyl, 2-pyrrolyl, 3-pyrrolyl, 2-imidazolyl, 4-imidazolyl, 3-pyrazolyl, 4-pyrazolyl, 2-thiazolyl, 3-isoxazolyl, 5-isoxazolyl, 2-pyridyl, 3-pyridyl, 4-  
 15 pyridyl, 2-pyrazinyl, 2-pyrimidinyl, 4-pyrimidinyl, 5-pyrimidinyl, 3-pyridazinyl, 4-pyridazinyl, and 1,3,5-triazin-2-yl, wherein a carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^{32}$ , the other carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^{36}$ , a carbon adjacent to  $R^{32}$  and two atoms from the carbon at the point of  
 20 attachment is optionally substituted by  $R^{33}$ , a carbon adjacent to  $R^{36}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{35}$ , and any carbon adjacent to both  $R^{33}$  and  $R^{35}$  is optionally substituted by  $R^{34}$ ;



$R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$  are independently selected from the group consisting of hydrido, amidino, guanidino, carboxy, methoxy, ethoxy, isopropoxy, propoxy, hydroxy, amino, methoxyamino, ethoxyamino, acetamido, trifluoroacetamido, N-methylamino, dimethylamino, N-ethylamino, methylthio, ethylthio, isopropylthio, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, 2,2,3,3,3-pentafluoropropyl, trifluoromethoxy, 1,1,2,2-tetrafluoroethoxy, fluoro, chloro, bromo, amidosulfonyl, N-methylamidodisulfonyl, N,N-dimethylamidodisulfonyl, hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl, 2,2,2-trifluoro-1-hydroxyethyl, methoxycarbonyl, ethoxycarbonyl, amidocarbonyl, N-methylamidocarbonyl, N,N-dimethylamidocarbonyl, cyano, and  $Q^b$ ;

A is selected from the group consisting of single covalent bond, NH, N(CH<sub>3</sub>), N(OH), CH<sub>2</sub>, CH<sub>3</sub>CH, CF<sub>3</sub>CH, NHC(O), N(CH<sub>3</sub>)C(O), C(O)NH, C(O)N(CH<sub>3</sub>), CH<sub>2</sub>CH<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>, CH<sub>3</sub>CHCH<sub>2</sub>, and CF<sub>3</sub>CHCH<sub>2</sub>;

$R^1$  and  $X^O$  are independently selected from the group consisting of hydrido, hydroxy, amino, amidino, hydroxyamino, aminomethyl, 1-aminoethyl, methylamino, dimethylamino, cyano, methyl, ethyl, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, methoxy, hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl, methoxyamino, methylthio, ethylthio, trifluoromethoxy, 1,1,2,2-tetrafluoroethoxy, fluoro, chloro, and bromo;

$R^2$  is  $Z^O-Q$ ;

$Z^O$  is selected from the group consisting of covalent single bond, O, S, NH, N(CH<sub>3</sub>), OCH<sub>2</sub>, SCH<sub>2</sub>, N(H)CH<sub>2</sub>, and N(CH<sub>3</sub>)CH<sub>2</sub>;

Q is selected from the group consisting of phenyl, 2-thienyl, 3-thienyl, 2-furyl, 3-furyl, 2-pyrrolyl, 3-pyrrolyl, 2-imidazolyl, 4-imidazolyl, 3-pyrazolyl, 4-pyrazolyl, 2-thiazolyl, 3-isoxazolyl, 5-isoxazolyl, 2-pyridyl, 3-pyridyl, 4-pyridyl, 2-pyrazinyl, 2-pyrimidinyl, 4-pyrimidinyl, 5-pyrimidinyl, 3-pyridazinyl, 4-pyridazinyl, and 1,3,5-triazin-2-yl, wherein a carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^9$ , the other carbon adjacent to the carbon at the point of attachment is optionally substituted by

$R^{13}$ , a carbon adjacent to  $R^9$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{10}$ , a carbon adjacent to  $R^{13}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{12}$ , and any carbon adjacent to both  $R^{10}$  and  $R^{12}$  is optionally substituted by  $R^{11}$ , with the proviso that Q is other than a phenyl when  $Z^0$  is a covalent single bond;

$R^9$ ,  $R^{11}$ , and  $R^{13}$  are independently selected from the group consisting of hydrido, amidino, guanidino, carboxy, methyl, ethyl, propyl, isopropyl, methoxy, ethoxy, isopropoxy, propoxy, hydroxy, amino, N-methylamino, N,N-dimethylamino, N-ethylamino, methylthio, ethylthio, isopropylthio, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, 2,2,3,3,3-pentafluoropropyl, trifluoromethoxy, 1,1,2,2-tetrafluoroethoxy, fluoro, chloro, bromo, methanesulfonamido, amidosulfonyl, N-methylamidossulfonyl, N,N-dimethylamidossulfonyl, hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl, 2,2,2-trifluoro-1-hydroxyethyl, amidocarbonyl, N-methylamidocarbonyl, N,N-dimethylamidocarbonyl, and cyano;

$R^{10}$  and  $R^{12}$  are independently selected from the group consisting of hydrido, amidino, guanidino, carboxy, carboxymethyl, methyl, ethyl, propyl, isopropyl, methoxy, ethoxy, isopropoxy, propoxy, hydroxy, amino, methoxyamino, ethoxyamino, acetamido, trifluoroacetamido, aminomethyl, 1-aminoethyl, 2-aminoethyl, N-methylamino, dimethylamino, N-ethylamino, methanesulfonamido, amidosulfonyl, N-methylamidossulfonyl, N,N-dimethylamidossulfonyl, hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl, 2,2,2-trifluoro-1-hydroxyethyl, methoxycarbonyl, ethoxycarbonyl, amidocarbonyl, N-methylamidocarbonyl, N,N-dimethylamidocarbonyl, N-benzylamidocarbonyl, N-(2-chlorobenzyl)amidocarbonyl, N-(3-fluorobenzyl)amidocarbonyl, N-(2-trifluoromethylbenzyl)amidocarbonyl, N-(1-phenylethyl)amidocarbonyl, N-(1-methyl-1-phenylethyl)amidocarbonyl, N-benzylamidossulfonyl, N-(2-chlorobenzyl)amidossulfonyl, N-ethylamidocarbonyl, N-isopropylamidocarbonyl, N-propylamidocarbonyl, N-isobutylamidocarbonyl, N-(2-butyl)amidocarbonyl, N-cyclobutylamidocarbonyl, N-

- cyclopentylamidocarbonyl, N-cyclohexylamidocarbonyl, fluoro, chloro, bromo, cyano, cyclobutoxy, cyclohexoxy, cyclohexylmethoxy, 4-trifluoromethylcyclohexylmethoxy, cyclopentoxo, benzyl, benzyloxy, 4-bromo-3-fluorophenoxy, 3-bromobenzyloxy, 4-bromobenzyloxy, 4-bromobenzylamino, 5-bromopyrid-2-ylmethylamino, 4-butoxyphenamino, 3-chlorobenzyl, 4-chlorophenoxy, 4-chloro-3-ethylphenoxy, 4-chloro-3-ethylbenzylamino, 4-chloro-3-ethylphenylamino, 3-chlorobenzyloxy, 4-chlorobenzyloxy, 4-chlorobenzylsulfonyl, 4-chlorophenylamino, 4-chlorophenylsulfonyl, 5-chloropyrid-3-yloxy, 2-cyanopyrid-3-yloxy, 2,3-difluorobenzyloxy, 2,4-difluorobenzyloxy, 3,4-difluorobenzyloxy, 2,5-difluorobenzyloxy, 3,5-difluorophenoxy, 3,5-difluorobenzyloxy, 4-difluoromethoxybenzyloxy, 2,3-difluorophenoxy, 2,4-difluorophenoxy, 2,5-difluorophenoxy, 3,5-dimethylphenoxy, 3,4-dimethylphenoxy, 3,4-dimethylbenzyloxy, 3,5-dimethylbenzyloxy, 4-ethoxyphenoxy, 4-ethylbenzyloxy, 3-ethylphenoxy, 4-ethylaminophenoxy, 3-ethyl-5-methylphenoxy, 4-fluorobenzyloxy, 2-fluoro-3-trifluoromethylbenzyloxy, 3-fluoro-5-trifluoromethylbenzyloxy, 4-fluoro-2-trifluoromethylbenzyloxy, 4-fluoro-3-trifluoromethylbenzyloxy, 2-fluorophenoxy, 4-fluorophenoxy, 2-fluoro-3-trifluoromethylphenoxy, 2-fluorobenzyloxy, 4-fluorophenylamino, 2-fluoro-4-trifluoromethylphenoxy, 4-isopropylbenzyloxy, 3-isopropylphenoxy, 4-isopropylphenoxy, 4-isopropyl-3-methylphenoxy, 4-isopropylbenzyloxy, 3-isopropylphenoxy, 4-isopropylphenoxy, 4-isopropyl-3-methylphenoxy, phenylamino, 1-phenylethoxy, 2-phenylethoxy, 2-phenylethyl, 2-phenylethylamino, phenylsulfonyl, 3-trifluoromethoxybenzyloxy, 4-trifluoromethoxybenzyloxy, 3-trifluoromethoxyphenoxy, 4-trifluoromethoxyphenoxy, 3-trifluoromethylbenzyloxy, 4-trifluoromethylbenzyloxy, 2,4-bis-trifluoromethylbenzyloxy, 3-trifluoromethylbenzyl, 3,5-bis-trifluoromethylbenzyloxy, 4-trifluoromethylphenoxy, 3-trifluoromethylphenoxy, 3-trifluoromethylthiobenzyloxy, 4-trifluoromethylthiobenzyloxy, 2,3,4-trifluorophenoxy, 2,3,5-trifluorophenoxy, 3-pentafluoroethylphenoxy, 3-(1,1,2,2-tetrafluoroethoxy)phenoxy, and 3-trifluoromethylthiophenoxy;

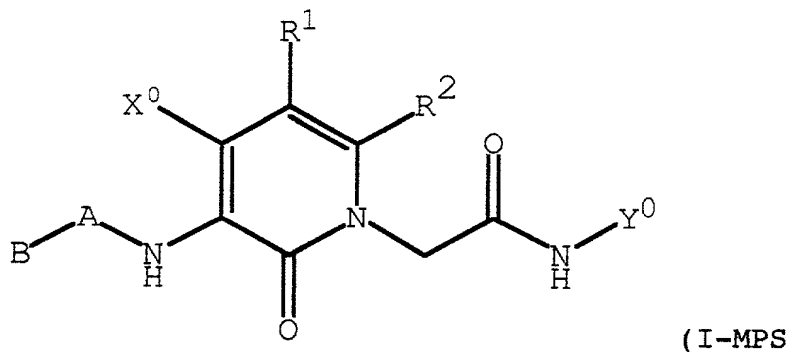
$R^{16}$  or  $R^{19}$  is optionally  $C(NR^{25})NR^{23}R^{24}$  with the proviso that  $R^{16}$ ,

$R^{19}$ , and  $Q^b$  are not simultaneously hydrido;

$Q^b$  is  $C(NR^{25})NR^{23}R^{24}$  or hydrido, with the proviso that no more than one of  $R^{23}$  and  $R^{24}$  is hydroxy at the same time;

$R^{23}$ ,  $R^{24}$ , and  $R^{25}$  are independently selected from the group consisting of hydrido, methyl, ethyl, and hydroxy.

- 5 In another more preferred specific embodiment of Formula I, compounds have the Formula I-MPS wherein B is a non-cyclic substituent:



wherein B is a non-cyclic substituent)

or a pharmaceutically acceptable salt thereof, wherein;

- 10 B is selected from the group consisting of hydrido, ethyl, 2-propenyl, 2-propynyl, propyl, isopropyl, butyl, 2-butenyl, 3-butenyl, 2-butyryl, sec-butyl, *tert*-butyl, isobutyl, 2-methylpropenyl, 1-pentyl, 2-pentenyl, 3-pentenyl, 4-pentenyl, 2-pentyryl, 3-pentyryl, 2-pentyl, 1-methyl-2-butenyl, 1-methyl-3-butenyl, 1-methyl-2-butyryl, 3-pentyl, 1-ethyl-2-propenyl, 2-methylbutyl, 2-methyl-2-butenyl, 2-methyl-3-butenyl, 2-methyl-3-butyryl, 3-methylbutyl, 3-methyl-2-butenyl, 3-methyl-3-butenyl, 1-hexyl, 2-hexenyl, 3-hexenyl, 4-hexenyl, 5-hexenyl, 2-hexynyl, 3-hexynyl, 4-hexynyl, 2-hexyl, 1-methyl-2-pentenyl, 1-methyl-3-pentenyl, 1-methyl-4-pentenyl, 1-methyl-2-pentyryl, 1-methyl-3-pentyryl, 3-hexyl, 1-ethyl-2-butenyl, 1-ethyl-3-butenyl, 1-propyl-2-propenyl, 1-ethyl-2-butyryl, 1-heptyl, 2-heptenyl, 3-heptenyl, 4-heptenyl, 5-heptenyl, 6-heptenyl, 2-heptyryl, 3-heptyryl, 4-heptyryl, 5-heptyryl, 2-heptyl, 1-methyl-2-hexenyl, 1-methyl-3-hexenyl, 1-methyl-4-hexenyl, 1-methyl-5-hexenyl, 1-methyl-2-hexynyl, 1-methyl-3-hexynyl, 1-methyl-4-hexynyl, 3-heptyl, 1-ethyl-2-pentenyl, 1-ethyl-3-pentenyl, 1-ethyl-4-pentenyl, 1-butyl-2-propenyl, 1-ethyl-2-pentyryl, 1-ethyl-3-pentyryl, 2,2,2-trifluoroethyl, 2,2-difluoropropyl, 4-trifluoromethyl-5,5,5-trifluoropentyl, 4-trifluoromethylpentyl,
- 25

5,5,6,6,6-pentafluorohexyl, and 3,3,3-trifluoropropyl, wherein each member of group B is optionally substituted at any carbon up to and including 5 atoms from the point of attachment of B to A with one or more of the group consisting of  $R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$ ;

5  $R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$  are independently selected from the

group consisting of hydrido, amidino, guanidino, carboxy, methoxy, ethoxy, isopropoxy, propoxy, hydroxy, amino, methoxyamino, ethoxyamino, acetamido, trifluoroacetamido, N-methylamino, dimethylamino, N-ethylamino, methylthio, ethylthio, isopropylthio, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, 10 2,2,3,3,3-pentafluoropropyl, trifluoromethoxy, 1,1,2,2-tetrafluoroethoxy, fluoro, chloro, bromo, amidosulfonyl, N-methylamidosulfonyl, N,N-dimethylamidosulfonyl, hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl, 2,2,2-trifluoro-1-hydroxyethyl, methoxycarbonyl, ethoxycarbonyl, amidocarbonyl, N-methylamidocarbonyl, N,N-dimethylamidocarbonyl, cyano, and  $Q^b$ ;

15 A is selected from the group consisting of single covalent bond, NH,  $N(CH_3)$ ,  $N(OH)$ ,  $CH_2$ ,  $CH_3CH$ ,  $CF_3CH$ ,  $NHC(O)$ ,  $N(CH_3)C(O)$ ,  $C(O)NH$ ,  $C(O)N(CH_3)$ ,  $CH_2CH_2$ ,  $CH_2CH_2CH_2$ ,  $CH_3CHCH_2$ , and  $CF_3CHCH_2$ ;

A is optionally selected from the group consisting of  $CH_2N(CH_3)$ ,  $CH_2N(CH_2CH_3)$ ,  $CH_2CH_2N(CH_3)$ , and  $CH_2CH_2N(CH_2CH_3)$  with the 20 proviso that B is hydrido;

$R^1$  and  $X^O$  are independently selected from the group consisting of hydrido, hydroxy, amino, amidino, hydroxyamino, aminomethyl, 1-aminoethyl, methylamino, dimethylamino, cyano, methyl, ethyl, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, methoxy, hydroxymethyl, 1-hydroxyethyl, 25 2-hydroxyethyl, methoxyamino, methylthio, ethylthio, trifluoromethoxy, 1,1,2,2-tetrafluoroethoxy, fluoro, chloro, and bromo;

$R^2$  is  $Z^0-Q$ ;

$Z^0$  is selected from the group consisting of covalent single bond, O, S, NH,  $N(CH_3)$ ,  $OCH_2$ ,  $SCH_2$ ,  $N(H)CH_2$ , and  $N(CH_3)CH_2$ ;

Q is selected from the group consisting of phenyl, 2-thienyl, 3-thienyl, 2-furyl, 3-furyl, 2-pyrrolyl, 3-pyrrolyl, 2-imidazolyl, 4-imidazolyl, 3-pyrazolyl, 4-pyrazolyl, 2-thiazolyl, 3-isoxazolyl, 5-isoxazolyl, 2-pyridyl, 3-pyridyl, 4-pyridyl, 2-pyrazinyl, 2-pyrimidinyl, 4-pyrimidinyl, 5-pyrimidinyl, 3-pyridazinyl, 4-pyridazinyl, and 1,3,5-triazin-2-yl, wherein a carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^9$ , the other carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^{13}$ , a carbon adjacent to  $R^9$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{10}$ , a carbon adjacent to  $R^{13}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{12}$ , and any carbon adjacent to both  $R^{10}$  and  $R^{12}$  is optionally substituted by  $R^{11}$ , with the proviso that Q is other than a phenyl when  $Z^0$  is a covalent single bond;

$R^9$ ,  $R^{11}$ , and  $R^{13}$  are independently selected from the group consisting of hydrido, amidino, guanidino, carboxy, methyl, ethyl, propyl, isopropyl, methoxy, ethoxy, isopropoxy, propoxy, hydroxy, amino, N-methylamino, N,N-dimethylamino, N-ethylamino, methylthio, ethylthio, isopropylthio, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, 2,2,3,3,3-pentafluoropropyl, trifluoromethoxy, 1,1,2,2-tetrafluoroethoxy, fluoro, chloro, bromo, methanesulfonamido, amidosulfonyl, N-methylamidosulfonyl, N,N-dimethylamidosulfonyl, hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl, 2,2,2-trifluoro-1-hydroxyethyl, amidocarbonyl, N-methylamidocarbonyl, N,N-dimethylamidocarbonyl, and cyano;

$R^{10}$  and  $R^{12}$  are independently selected from the group consisting of hydrido, amidino, guanidino, carboxy, carboxymethyl, methyl, ethyl, propyl, isopropyl, methoxy, ethoxy, isopropoxy, propoxy, hydroxy, amino, methoxyamino, ethoxyamino, acetamido, trifluoroacetamido, aminomethyl, 1-aminoethyl, 2-aminoethyl, N-methylamino, dimethylamino, N-ethylamino, methanesulfonamido, amidosulfonyl, N-methylamidosulfonyl, N,N-dimethylamidosulfonyl, hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl, 2,2,2-trifluoro-1-hydroxyethyl, methoxycarbonyl, ethoxycarbonyl, amidocarbonyl, N-

- methyamidocarbonyl, N,N-dimethylamidocarbonyl, N-benzylamidocarbonyl, N-(2-chlorobenzyl)amidocarbonyl, N-(3-fluorobenzyl)amidocarbonyl, N-(2-trifluoromethylbenzyl)amidocarbonyl, N-(1-phenylethyl)amidocarbonyl, N-(1-methyl-1-phenylethyl)amidocarbonyl, N-benzylamidosulfonyl, N-(2-chlorobenzyl)amidosulfonyl, N-ethylamidocarbonyl, N-isopropylamidocarbonyl, N-propylamidocarbonyl, N-isobutylamidocarbonyl, N-(2-butyl)amidocarbonyl, N-cyclobutylamidocarbonyl, N-cyclopentylamidocarbonyl, N-cyclohexylamidocarbonyl, fluoro, chloro, bromo, cyano, cyclobutoxy, cyclohexoxy, cyclohexylmethoxy, 4-trifluoromethylcyclohexylmethoxy, cyclopentoxy, benzyl, benzyloxy, 4-bromo-3-fluorophenoxy, 3-bromobenzyloxy, 4-bromobenzyloxy, 4-bromobenzylamino, 5-bromopyrid-2-ylmethylamino, 4-butoxyphenamino, 3-chlorobenzyl, 4-chlorophenoxy, 4-chloro-3-ethylphenoxy, 4-chloro-3-ethylbenzylamino, 4-chloro-3-ethylphenylamino, 3-chlorobenzyloxy, 4-chlorobenzyloxy, 4-chlorobenzylsulfonyl, 4-chlorophenylamino, 4-chlorophenylsulfonyl, 5-chloropyrid-3-yloxy, 2-cyanopyrid-3-yloxy, 2,3-difluorobenzyloxy, 2,4-difluorobenzyloxy, 3,4-difluorobenzyloxy, 2,5-difluorobenzyloxy, 3,5-difluorophenoxy, 3,5-difluorobenzyloxy, 4-difluoromethoxybenzyloxy, 2,3-difluorophenoxy, 2,4-difluorophenoxy, 2,5-difluorophenoxy, 3,5-dimethylphenoxy, 3,4-dimethylphenoxy, 3,4-dimethylbenzyloxy, 3,5-dimethylbenzyloxy, 4-ethoxyphenoxy, 4-ethylbenzyloxy, 3-ethylphenoxy, 4-ethylaminophenoxy, 3-ethyl-5-methylphenoxy, 4-fluorobenzyloxy, 2-fluoro-3-trifluoromethylbenzyloxy, 3-fluoro-5-trifluoromethylbenzyloxy, 4-fluoro-2-trifluoromethylbenzyloxy, 4-fluoro-3-trifluoromethylbenzyloxy, 2-fluorophenoxy, 4-fluorophenoxy, 2-fluoro-3-trifluoromethylphenoxy, 2-fluorobenzyloxy, 4-fluorophenylamino, 2-fluoro-4-trifluoromethylphenoxy, 4-isopropylbenzyloxy, 3-isopropylphenoxy, 4-isopropylphenoxy, 4-isopropyl-3-methylphenoxy, 4-isopropylbenzyloxy, 3-isopropylphenoxy, 4-isopropylphenoxy, 4-isopropyl-3-methylphenoxy, phenylamino, 1-phenylethoxy, 2-phenylethoxy, 2-phenylethyl, 2-phenylethylamino, phenylsulfonyl, 3-trifluoromethoxybenzyloxy, 4-trifluoromethoxybenzyloxy, 3-trifluoromethoxyphenoxy, 4-trifluoromethoxyphenoxy, 3-trifluoromethylbenzyloxy, 4-trifluoromethylbenzyloxy, 2,4-bis-trifluoromethylbenzyloxy, 3-trifluoromethylbenzyl, 3,5-bis-trifluoromethylbenzyloxy, 4-

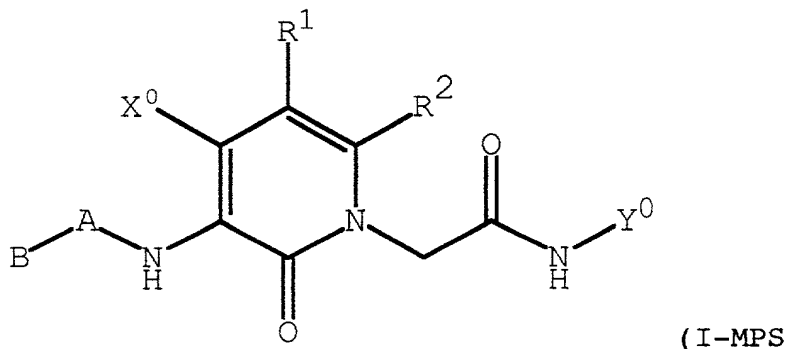
trifluoromethylphenoxy, 3-trifluoromethylphenoxy, 3-trifluoromethylthiobenzyloxy, 4-trifluoromethylthiobenzyloxy, 2,3,4-trifluorophenoxy, 2,3,5-trifluorophenoxy, 3-pentafluoroethylphenoxy, 3-(1,1,2,2-tetrafluoroethoxy)phenoxy, and 3-trifluoromethylthiophenoxy;

- 5  $R^{16}$  or  $R^{19}$  is optionally selected from the group consisting of  $NR^{20}R^{21}$ ,  $C(NR^{25})NR^{23}R^{24}$ , and  $N(R^{26})C(NR^{25})N(R^{23})(R^{24})$ , with the proviso that  $R^{16}$ ,  $R^{19}$ , and  $Q^b$  are not simultaneously hydrido;

- $Q^b$  is selected from the group consisting of  $NR^{20}R^{21}$ , hydrido,  $C(NR^{25})NR^{23}R^{24}$ , and  $N(R^{26})C(NR^{25})N(R^{23})(R^{24})$ , with the provisos that no  
10 more than one of  $R^{20}$  and  $R^{21}$  is hydroxy at the same time and that no more than one of  $R^{23}$  and  $R^{24}$  is hydroxy at the same time;

$R^{20}$ ,  $R^{21}$ ,  $R^{23}$ ,  $R^{24}$ ,  $R^{25}$ , and  $R^{26}$  are independently selected from the group consisting of hydrido, methyl, ethyl, propyl, butyl, isopropyl, and hydroxy.

- In still another more preferred specific embodiment of Formula I,  
15 compounds have the Formula I-MPS wherein B is a non-aromatic cyclic substituent:



wherein B is a non-aromatic cyclic substituent)  
or a pharmaceutically acceptable salt thereof, wherein;

- 20 B is selected from the group consisting of cyclopropyl, cyclobutyl, oxetan-3-yl, azetidin-1-yl, azetidin-2-yl, azetidin-3-yl, thiaetan-3-yl, cyclopentyl, cyclohexyl, norbornyl, 7-oxabicyclo[2.2.1]heptan-2-yl, bicyclo[3.1.0]hexan-6-yl, cycloheptyl, 2-morpholinyl, 3-morpholinyl, 4-morpholinyl, 1-piperazinyl, 2-



- piperaziny, 1-piperidinyl, 2-piperidinyl, 3-piperidinyl, 4-piperidinyl, 1-pyrrolidinyl, 2-pyrrolidinyl, 3-pyrrolidinyl, 2-dioxanyl, 4H-2-pyranyl, 4H-3-pyranyl, 4H-4-pyranyl, 4H-pyran-4-one-2-yl, 4H-pyran-4-one-3-yl, 2-tetrahydrofuran-yl, 3-tetrahydrofuran-yl, 2-tetrahydropyranyl, 3-tetrahydropyranyl, 4-tetrahydropyranyl, 2-tetrahydrothienyl, and 3-tetrahydrothienyl, wherein each ring carbon is optionally substituted with  $R^{33}$ , ring carbons and a nitrogen adjacent to the carbon atom at the point of attachment are optionally substituted with  $R^9$  or  $R^{13}$ , a ring carbon or nitrogen adjacent to the  $R^9$  position and two atoms from the point of attachment is optionally substituted with  $R^{10}$ , and a ring carbon or nitrogen adjacent to the  $R^{13}$  position and two atoms from the point of attachment is optionally substituted with  $R^{12}$ ;

- $R^9$ ,  $R^{11}$ , and  $R^{13}$  are independently selected from the group consisting of hydrido, amidino, guanidino, carboxy, methyl, ethyl, propyl, isopropyl, methoxy, ethoxy, isopropoxy, propoxy, hydroxy, amino, N-methylamino, N,N-dimethylamino, N-ethylamino, methylthio, ethylthio, isopropylthio, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, 2,2,3,3,3-pentafluoropropyl, trifluoromethoxy, 1,1,2,2-tetrafluoroethoxy, fluoro, chloro, bromo, methanesulfonamido, amidosulfonyl, N-methylamidodisulfonyl, N,N-dimethylamidodisulfonyl, hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl, 2,2,2-trifluoro-1-hydroxyethyl, amidocarbonyl, N-methylamidocarbonyl, N,N-dimethylamidocarbonyl, and cyano;

- $R^{10}$  and  $R^{12}$  are independently selected from the group consisting of hydrido, amidino, guanidino, carboxy, carboxymethyl, methyl, ethyl, propyl, isopropyl, methoxy, ethoxy, isopropoxy, propoxy, hydroxy, amino, methoxyamino, ethoxyamino, acetamido, trifluoroacetamido, aminomethyl, 1-aminoethyl, 2-aminoethyl, N-methylamino, dimethylamino, N-ethylamino, methanesulfonamido, amidosulfonyl, N-methylamidodisulfonyl, N,N-dimethylamidodisulfonyl, hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl, 2,2,2-trifluoro-1-hydroxyethyl, methoxycarbonyl, ethoxycarbonyl, amidocarbonyl, N-

- methanamidocarbonyl, N,N-dimethanamidocarbonyl, N-benzanamidocarbonyl, N-(2-chlorobenzyl)amidocarbonyl, N-(3-fluorobenzyl)amidocarbonyl, N-(2-trifluoromethylbenzyl)amidocarbonyl, N-(1-phenylethyl)amidocarbonyl, N-(1-methyl-1-phenylethyl)amidocarbonyl, N-benzanamidodisulfonyl, N-(2-chlorobenzyl)amidodisulfonyl, N-ethanamidocarbonyl, N-isopropylamidocarbonyl, N-propylamidocarbonyl, N-isobutylamidocarbonyl, N-(2-butyl)amidocarbonyl, N-cyclobutylamidocarbonyl, N-cyclopentylamidocarbonyl, N-cyclohexylamidocarbonyl, fluoro, chloro, bromo, cyano, cyclobutoxy, cyclohexoxy, cyclohexylmethoxy, 4-trifluoromethylcyclohexylmethoxy, cyclopentoxo, benzyl, benzyloxy, 4-bromo-3-fluorophenoxy, 3-bromobenzyloxy, 4-bromobenzyloxy, 4-bromobenzylamino, 5-bromopyrid-2-ylmethylamino, 4-butoxyphenamino, 3-chlorobenzyl, 4-chlorophenoxy, 4-chloro-3-ethylphenoxy, 4-chloro-3-ethylbenzylamino, 4-chloro-3-ethylphenylamino, 3-chlorobenzyloxy, 4-chlorobenzyloxy, 4-chlorobenzylsulfonyl, 4-chlorophenylamino, 4-chlorophenylsulfonyl, 5-chloropyrid-3-yloxy, 2-cyanopyrid-3-yloxy, 2,3-difluorobenzyloxy, 2,4-difluorobenzyloxy, 3,4-difluorobenzyloxy, 2,5-difluorobenzyloxy, 3,5-difluorophenoxy, 3,5-difluorobenzyloxy, 4-difluoromethoxybenzyloxy, 2,3-difluorophenoxy, 2,4-difluorophenoxy, 2,5-difluorophenoxy, 3,5-dimethylphenoxy, 3,4-dimethylphenoxy, 3,4-dimethylbenzyloxy, 3,5-dimethylbenzyloxy, 4-ethoxyphenoxy, 4-ethylbenzyloxy, 3-ethylphenoxy, 4-ethylaminophenoxy, 3-ethyl-5-methylphenoxy, 4-fluorobenzyloxy, 2-fluoro-3-trifluoromethylbenzyloxy, 3-fluoro-5-trifluoromethylbenzyloxy, 4-fluoro-2-trifluoromethylbenzyloxy, 4-fluoro-3-trifluoromethylbenzyloxy, 2-fluorophenoxy, 4-fluorophenoxy, 2-fluoro-3-trifluoromethylphenoxy, 2-fluorobenzyloxy, 4-fluorophenylamino, 2-fluoro-4-trifluoromethylphenoxy, 4-isopropylbenzyloxy, 3-isopropylphenoxy, 4-isopropylphenoxy, 4-isopropyl-3-methylphenoxy, 4-isopropylbenzyloxy, 3-isopropylphenoxy, 4-isopropylphenoxy, 4-isopropyl-3-methylphenoxy, phenylamino, 1-phenylethoxy, 2-phenylethoxy, 2-phenylethyl, 2-phenylethylamino, phenylsulfonyl, 3-trifluoromethoxybenzyloxy, 4-trifluoromethoxybenzyloxy, 3-trifluoromethoxyphenoxy, 4-trifluoromethoxyphenoxy, 3-trifluoromethylbenzyloxy, 4-trifluoromethylbenzyloxy, 2,4-bis-trifluoromethylbenzyloxy, 3-trifluoromethylbenzyl, 3,5-bis-trifluoromethylbenzyloxy, 4-

trifluoromethylphenoxy, 3-trifluoromethylphenoxy, 3-trifluoromethylthiobenzyloxy, 4-trifluoromethylthiobenzyloxy, 2,3,4-trifluorophenoxy, 2,3,5-trifluorophenoxy, 3-pentafluoroethylphenoxy, 3-(1,1,2,2-tetrafluoroethoxy)phenoxy, and 3-trifluoromethylthiophenoxy;

- 5             $R^{33}$  is selected from the group consisting of hydrido, amidino, guanidino, carboxy, methoxy, ethoxy, isopropoxy, propoxy, hydroxy, amino, methoxyamino, ethoxyamino, acetamido, trifluoroacetamido, N-methylamino, dimethylamino, N-ethylamino, methylthio, ethylthio, isopropylthio, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, 2,2,3,3,3-pentafluoropropyl, trifluoromethoxy, 1,1,2,2-tetrafluoroethoxy, fluoro, chloro, 10 bromo, amidosulfonyl, N-methylamidosulfonyl, N,N-dimethylamidosulfonyl, hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl, 2,2,2-trifluoro-1-hydroxyethyl, methoxycarbonyl, ethoxycarbonyl, amidocarbonyl, N-methylamidocarbonyl, N,N-dimethylamidocarbonyl, cyano, and  $Q^b$ ;

- 15            A is selected from the group consisting of single covalent bond, NH,  $N(CH_3)$ ,  $N(OH)$ ,  $CH_2$ ,  $CH_3CH$ ,  $CF_3CH$ ,  $NHC(O)$ ,  $N(CH_3)C(O)$ ,  $C(O)NH$ ,  $C(O)N(CH_3)$ ,  $CH_2CH_2$ ,  $CH_2CH_2CH_2$ ,  $CH_3CHCH_2$ , and  $CF_3CHCH_2$ ;

- $R^1$  and  $X^O$  are independently selected from the group consisting of hydrido, hydroxy, amino, amidino, hydroxyamino, aminomethyl, 1-aminoethyl, 20 methylamino, dimethylamino, cyano, methyl, ethyl, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, methoxy, hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl, methoxyamino, methylthio, ethylthio, trifluoromethoxy, 1,1,2,2-tetrafluoroethoxy, fluoro, chloro, and bromo;

$R^2$  is  $Z^0-Q$ ;

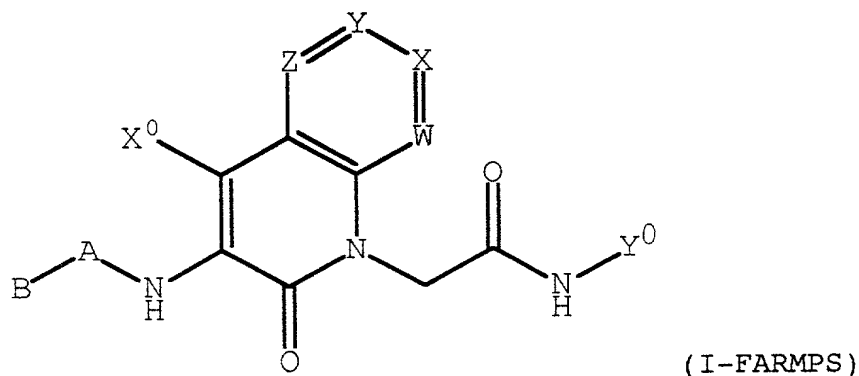
- 25             $Z^0$  is selected from the group consisting of covalent single bond, O, S, NH,  $N(CH_3)$ ,  $OCH_2$ ,  $SCH_2$ ,  $N(H)CH_2$ , and  $N(CH_3)CH_2$ ;

- Q is selected from the group consisting of phenyl, 2-thienyl, 3-thienyl, 2-furyl, 3-furyl, 2-pyrrolyl, 3-pyrrolyl, 2-imidazolyl, 4-imidazolyl, 3-pyrazolyl, 4-pyrazolyl, 2-thiazolyl, 3-isoxazolyl, 5-isoxazolyl, 2-pyridyl, 3-pyridyl, 4- 30 pyridyl, 2-pyrazinyl, 2-pyrimidinyl, 4-pyrimidinyl, 5-pyrimidinyl, 3-pyridazinyl, 4-pyridazinyl, and 1,3,5-triazin-2-yl, wherein a carbon adjacent to the carbon at

- the point of attachment is optionally substituted by  $R^9$ , the other carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^{13}$ , a carbon adjacent to  $R^9$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{10}$ , a carbon adjacent to  $R^{13}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{12}$ , and any carbon adjacent to both  $R^{10}$  and  $R^{12}$  is optionally substituted by  $R^{11}$ , with the proviso that Q is other than a phenyl when  $Z^0$  is a covalent single bond;

- $R^{16}$  or  $R^{19}$  is optionally  $C(NR^{25})NR^{23}R^{24}$  with the proviso that  $R^{16}$ ,  $R^{19}$ , and  $Q^b$  are not simultaneously hydrido;
- $Q^b$  is  $C(NR^{25})NR^{23}R^{24}$  or hydrido, with the proviso that no more than one of  $R^{23}$  and  $R^{24}$  is hydroxy at the same time;
- $R^{23}$ ,  $R^{24}$ , and  $R^{25}$  are independently selected from the group consisting of hydrido, methyl, ethyl, and hydroxy.

- 15 In a further even more preferred embodiment of compounds of Formula I, compounds have the Formula I-FARMPS wherein there are two fused aromatic rings:



- or a pharmaceutically acceptable salt thereof, wherein;
- 20 B is selected from the group consisting of phenyl, 2-thienyl, 3-thienyl, 2-furyl, 3-furyl, 2-pyrrolyl, 3-pyrrolyl, 2-imidazolyl, 4-imidazolyl, 3-pyrazolyl,

4-pyrazolyl, 2-thiazolyl, 3-isoxazolyl, 5-isoxazolyl, 2-pyridyl, 3-pyridyl, 4-pyridyl, 2-pyrazinyl, 2-pyrimidinyl, 4-pyrimidinyl, 5-pyrimidinyl, 3-pyridazinyl, 4-pyridazinyl, and 1,3,5-triazin-2-yl, wherein a carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^{32}$ , the other carbon

- 5 adjacent to the carbon at the point of attachment is optionally substituted by  $R^{36}$ , a carbon adjacent to  $R^{32}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{33}$ , a carbon adjacent to  $R^{36}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{35}$ , and any carbon adjacent to both  $R^{33}$  and  $R^{35}$  is optionally substituted by  $R^{34}$ ;

$R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$  are independently selected from the

- group consisting of hydrido, amidino, guanidino, carboxy, methoxy, ethoxy, isopropoxy, propoxy, hydroxy, amino, methoxyamino, ethoxyamino, acetamido, trifluoroacetamido, N-methylamino, dimethylamino, N-ethylamino, methylthio, ethylthio, isopropylthio, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, 2,2,3,3,3-pentafluoropropyl, trifluoromethoxy, 1,1,2,2-tetrafluoroethoxy, fluoro, chloro, bromo, amidosulfonyl, N-methylamidosulfonyl, N,N-dimethylamidosulfonyl, hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl, 2,2,2-trifluoro-1-hydroxyethyl, methoxycarbonyl, ethoxycarbonyl, amidocarbonyl, N-methylamidocarbonyl, N,N-dimethylamidocarbonyl, cyano, and  $Q^b$ ;

- B is selected from the group consisting of hydrido, ethyl, 2-propenyl, 2-propynyl, propyl, isopropyl, butyl, 2-butenyl, 3-butenyl, 2-butyryl, sec-butyl, *tert*-butyl, isobutyl, 2-methylpropenyl, 1-pentyl, 2-pentenyl, 3-pentenyl, 4-pentenyl, 2-pentyryl, 3-pentyryl, 2-pentyl, 1-methyl-2-butenyl, 1-methyl-3-butenyl, 1-methyl-2-butyryl, 3-pentyl, 1-ethyl-2-propenyl, 2-methylbutyl, 2-methyl-2-butenyl, 2-methyl-3-butenyl, 2-methyl-3-butyryl, 3-methylbutyl, 3-methyl-2-butenyl, 3-methyl-3-butenyl, 1-hexyl, 2-hexenyl, 3-hexenyl, 4-hexenyl, 5-hexenyl, 2-hexynyl, 3-hexynyl, 4-hexynyl, 2-hexyl, 1-methyl-2-pentenyl, 1-methyl-3-pentenyl, 1-methyl-4-pentenyl, 1-methyl-2-pentyryl, 1-methyl-3-pentyryl, 3-hexyl, 1-ethyl-2-butenyl, 1-ethyl-3-butenyl, 1-propyl-2-

propenyl, 1-ethyl-2-butyryl, 1-heptyl, 2-heptenyl, 3-heptenyl, 4-heptenyl, 5-heptenyl, 6-heptenyl, 2-heptynyl, 3-heptynyl, 4-heptynyl, 5-heptynyl, 2-heptyl, 1-methyl-2-hexenyl, 1-methyl-3-hexenyl, 1-methyl-4-hexenyl, 1-methyl-5-hexenyl, 1-methyl-2-hexynyl, 1-methyl-3-hexynyl, 1-methyl-4-hexynyl, 3-heptyl, 1-ethyl-2-pentenyl, 1-ethyl-3-pentenyl, 1-ethyl-4-pentenyl, 1-butyl-2-propenyl, 1-ethyl-2-pentynyl, 1-ethyl-3-pentynyl, 2,2,2-trifluoroethyl, 2,2-difluoropropyl, 4-trifluoromethyl-5,5,5-trifluoropentyl, 4-trifluoromethylpentyl, 5,5,6,6,6-pentafluorohexyl, and 3,3,3-trifluoropropyl, wherein each member of group B is optionally substituted at any carbon up to and including 5 atoms from the point of attachment of B to A with one or more of the group consisting of  $R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$ ;

B is optionally selected from the group consisting of cyclopropyl, cyclobutyl, oxetan-3-yl, azetidin-1-yl, azetidin-2-yl, azetidin-3-yl, thiaetan-3-yl, cyclopentyl, cyclohexyl, norbornyl, 7-oxabicyclo[2.2.1]heptan-2-yl, bicyclo[3.1.0]hexan-6-yl, cycloheptyl, 2-morpholinyl, 3-morpholinyl, 4-morpholinyl, 1-piperazinyl, 2-piperazinyl, 1-piperidinyl, 2-piperidinyl, 3-piperidinyl, 4-piperidinyl, 1-pyrrolidinyl, 2-pyrrolidinyl, 3-pyrrolidinyl, 2-dioxanyl, 4H-2-pyranyl, 4H-3-pyranyl, 4H-4-pyranyl, 4H-pyran-4-one-2-yl, 4H-pyran-4-one-3-yl, 2-tetrahydrofuranyl, 3-tetrahydrofuranyl, 2-tetrahydropyranyl, 3-tetrahydropyranyl, 4-tetrahydropyranyl, 2-tetrahydrothienyl, and 3-tetrahydrothienyl, wherein each ring carbon is optionally substituted with  $R^{33}$ , a ring carbon and nitrogen atoms adjacent to the carbon atom at the point of attachment is optionally substituted with  $R^9$  or  $R^{13}$ , a ring carbon or nitrogen atom adjacent to the  $R^9$  position and two atoms from the point of attachment is optionally substituted with  $R^{10}$ , and a ring carbon or nitrogen atom adjacent to the  $R^{13}$  position and two atoms from the point of attachment is optionally substituted with  $R^{12}$ ;

$R^9$  and  $R^{13}$  are independently selected from the group consisting of hydrido, amidino, guanidino, carboxy, methyl, ethyl, propyl, isopropyl, methoxy, ethoxy, isopropoxy, propoxy, hydroxy, amino, N-methylamino, N,N-

- dimethylamino, N-ethylamino, methylthio, ethylthio, isopropylthio, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, 2,2,3,3,3-pentafluoropropyl, trifluoromethoxy, 1,1,2,2-tetrafluoroethoxy, fluoro, chloro, bromo, methanesulfonamido, amidosulfonyl, N-methylamidosulfonyl, N,N-dimethylamidosulfonyl, hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl, 2,2,2-trifluoro-1-hydroxyethyl, amidocarbonyl, N-methylamidocarbonyl, N,N-dimethylamidocarbonyl, and cyano;
- 5  $R^{10}$  and  $R^{12}$  are independently selected from the group consisting of
- hydrido, amidino, guanidino, carboxy, carboxymethyl, methyl, ethyl, propyl, isopropyl, methoxy, ethoxy, isopropoxy, propoxy, hydroxy, amino, methoxyamino, ethoxyamino, acetamido, trifluoroacetamido, aminomethyl, 1-aminoethyl, 2-aminoethyl, N-methylamino, dimethylamino, N-ethylamino, methanesulfonamido, amidosulfonyl, N-methylamidosulfonyl, N,N-dimethylamidosulfonyl, hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl, 2,2,2-trifluoro-1-hydroxyethyl, methoxycarbonyl, ethoxycarbonyl, amidocarbonyl, N-methylamidocarbonyl, N,N-dimethylamidocarbonyl, N-benzylamidocarbonyl, N-(2-chlorobenzyl)amidocarbonyl, N-(3-fluorobenzyl)amidocarbonyl, N-(2-trifluoromethylbenzyl)amidocarbonyl, N-(1-phenylethyl)amidocarbonyl, N-(1-methyl-1-phenylethyl)amidocarbonyl, N-benzylamidosulfonyl, N-(2-chlorobenzyl)amidosulfonyl, N-ethylamidocarbonyl, N-isopropylamidocarbonyl, N-propylamidocarbonyl, N-isobutylamidocarbonyl, N-(2-butyl)amidocarbonyl, N-cyclobutylamidocarbonyl, N-cyclopentylamidocarbonyl, N-cyclohexylamidocarbonyl, fluoro, chloro, bromo, cyano, cyclobutoxy, cyclohexoxy, cyclohexylmethoxy, 4-trifluoromethylcyclohexylmethoxy, cyclopentoxy, benzyl, benzyloxy, 4-bromo-3-fluorophenoxy, 3-bromobenzyloxy, 4-bromobenzyloxy, 4-bromobenzylamino, 5-bromopyrid-2-ylmethylamino, 4-butoxyphenamino, 3-chlorobenzyl, 4-chlorophenoxy, 4-chloro-3-ethylphenoxy, 4-chloro-3-ethylbenzylamino, 4-chloro-3-ethylphenylamino, 3-chlorobenzyloxy, 4-chlorobenzyloxy, 4-chlorobenzylsulfonyl, 4-chlorophenylamino, 4-chlorophenylsulfonyl, 5-chloropyrid-3-ylloxy, 2-cyanopyrid-3-ylloxy, 2,3-difluorobenzyloxy, 2,4-difluorobenzyloxy, 3,4-difluorobenzyloxy, 2,5-difluorobenzyloxy, 3,5-difluorophenoxy, 3,5-difluorobenzyloxy, 4-difluoromethoxybenzyloxy, 2,3-difluorophenoxy, 2,4-difluorophenoxy, 2,5-difluorophenoxy, 3,5-dimethylphenoxy, 3,4-dimethylphenoxy, 3,4-
- 10
- 15
- 20
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- 35

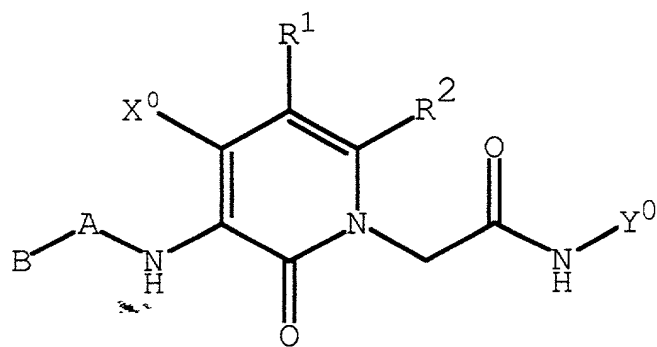
- dimethylbenzyloxy, 3,5-dimethylbenzyloxy, 4-ethoxyphenoxy, 4-ethylbenzyloxy, 3-ethylphenoxy, 4-ethylaminophenoxy, 3-ethyl-5-methylphenoxy, 4-fluorobenzyloxy, 2-fluoro-3-trifluoromethylbenzyloxy, 3-fluoro-5-trifluoromethylbenzyloxy, 4-fluoro-2-trifluoromethylbenzyloxy, 4-fluoro-3-trifluoromethylbenzyloxy, 2-fluorophenoxy, 4-fluorophenoxy, 2-fluoro-3-trifluoromethylphenoxy, 2-fluorobenzyloxy, 4-fluorophenylamino, 2-fluoro-4-trifluoromethylphenoxy, 4-isopropylbenzyloxy, 3-isopropylphenoxy, 4-isopropylphenoxy, 4-isopropyl-3-methylphenoxy, 4-isopropylbenzyloxy, 3-isopropylphenoxy, 4-isopropylphenoxy, 4-isopropyl-3-methylphenoxy,
- 10 phenylamino, 1-phenylethoxy, 2-phenylethoxy, 2-phenylethyl, 2-phenylethylamino, phenylsulfonyl, 3-trifluoromethoxybenzyloxy, 4-trifluoromethoxybenzyloxy, 3-trifluoromethoxyphenoxy, 4-trifluoromethoxyphenoxy, 3-trifluoromethylbenzyloxy, 4-trifluoromethylbenzyloxy, 2,4-bis-trifluoromethylbenzyloxy, 3-trifluoromethylbenzyl, 3,5-bis-trifluoromethylbenzyloxy, 4-trifluoromethylphenoxy, 3-trifluoromethylphenoxy, 3-trifluoromethylthiobenzyloxy, 4-trifluoromethylthiobenzyloxy, 2,3,4-trifluorophenoxy, 2,3,5-trifluorophenoxy, 3-pentafluoroethylphenoxy, 3-(1,1,2,2-tetrafluoroethoxy)phenoxy, and 3-trifluoromethylthiophenoxy;
- 20 A is selected from the group consisting of single covalent bond, NH, N(CH<sub>3</sub>), N(OH), CH<sub>2</sub>, CH<sub>3</sub>CH, CF<sub>3</sub>CH, NHC(O), N(CH<sub>3</sub>)C(O), C(O)NH, C(O)N(CH<sub>3</sub>), CH<sub>2</sub>CH<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>, CH<sub>3</sub>CHCH<sub>2</sub>, and CF<sub>3</sub>CHCH<sub>2</sub>;

- A is optionally selected from the group consisting of CH<sub>2</sub>N(CH<sub>3</sub>), CH<sub>2</sub>N(CH<sub>2</sub>CH<sub>3</sub>), CH<sub>2</sub>CH<sub>2</sub>N(CH<sub>3</sub>), and CH<sub>2</sub>CH<sub>2</sub>N(CH<sub>2</sub>CH<sub>3</sub>) with the
- 25 proviso that B is hydrido;

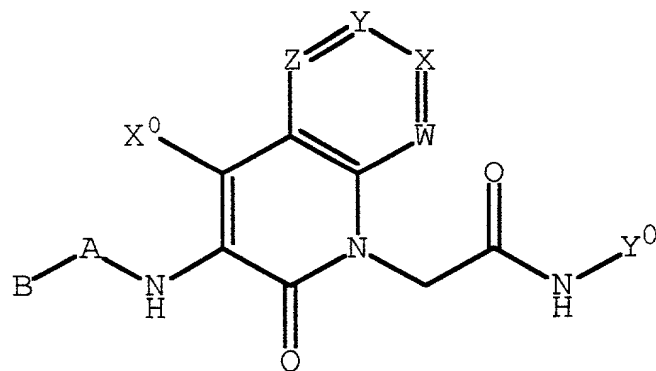
- X<sup>O</sup> is selected from the group consisting of hydrido, hydroxy, amino, amidino, hydroxyamino, aminomethyl, 1-aminoethyl, methylamino, dimethylamino, cyano, methyl, ethyl, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, methoxy, hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl,
- 30 methoxyamino, methylthio, ethylthio, trifluoromethoxy, 1,1,2,2-tetrafluoroethoxy, fluoro, chloro, and bromo;



- W, X, Y, and Z are independently selected from the group consisting of CH, N, CF, CCl, C-CN, C-CH<sub>3</sub>, C-CH<sub>2</sub>CH<sub>3</sub>, C-NH<sub>2</sub>, C-CH<sub>2</sub>NH<sub>2</sub>, C-CH<sub>2</sub>NHCH<sub>3</sub>, C-NHCH<sub>3</sub>, C-N(CH<sub>3</sub>)<sub>2</sub>, C-CH(NH<sub>2</sub>)CH<sub>3</sub>, C-CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>, C-NHOCH<sub>3</sub>, C-NHOCH<sub>2</sub>CH<sub>3</sub>, C-C(NH)NH<sub>2</sub>,  
 5 C-C(NO<sub>2</sub>)NH<sub>2</sub>, C-OH, C-CH<sub>2</sub>OH, C-CH<sub>2</sub>CH<sub>2</sub>OH, C-CH(OH)CH<sub>3</sub>, C-OCH<sub>3</sub>, C-OCH<sub>2</sub>CH<sub>3</sub>, C-CO<sub>2</sub>H, C-CO<sub>2</sub>CH<sub>3</sub>, C-C(O)NH<sub>2</sub>, C-C(O)NHCH<sub>3</sub>, C-C(O)N(CH<sub>3</sub>)<sub>2</sub>, N-benzylamidocarbonyl-C, N-(2-chlorobenzyl)amidocarbonyl-C, N-(3-fluorobenzyl)amidocarbonyl-C, N-(2-trifluoromethylbenzyl)amidocarbonyl-C,  
 10 N-(1-phenylethyl)amidocarbonyl-C, N-(1-methyl-1-phenylethyl)amidocarbonyl-C, N-benzylamidosulfonyl-C, N-(2-chlorobenzyl)amidosulfonyl-C, N-ethylamidocarbonyl-C, N-isopropylamidocarbonyl-C, N-propylamidocarbonyl-C, N-isobutylamidocarbonyl-C, N-(2-butyl)amidocarbonyl-C,  
 15 N-cyclobutylamidocarbonyl-C, N-cyclopentylamidocarbonyl-C, N-cyclohexylamidocarbonyl-C, C-NH(O)CCH<sub>3</sub>, and C-NH(O)CCF<sub>3</sub>;  
 $R^{16}$  or  $R^{19}$  is optionally selected from the group consisting of  $NR^{20}R^{21}$ ,  $C(NR^{25})NR^{23}R^{24}$ , and  $N(R^{26})C(NR^{25})N(R^{23})(R^{24})$ , with the proviso that  $R^{16}$ ,  $R^{19}$ , and  $Q^b$  are not simultaneously hydrido;  
 20  $Q^b$  is selected from the group consisting of  $NR^{20}R^{21}$ , hydrido,  $C(NR^{25})NR^{23}R^{24}$ , and  $N(R^{26})C(NR^{25})N(R^{23})(R^{24})$ , with the provisos that no more than one of  $R^{20}$  and  $R^{21}$  is hydroxy at the same time and that no more than one of  $R^{23}$  and  $R^{24}$  is hydroxy at the same time;  
 $R^{20}$ ,  $R^{21}$ ,  $R^{23}$ ,  $R^{24}$ ,  $R^{25}$ , and  $R^{26}$  are independently selected from the  
 25 group consisting of hydrido, methyl, ethyl, propyl, butyl, isopropyl, and hydroxy.  
 The more preferred specific embodiment (I-MPS) and (I-FARMPS) compounds of the present invention having the Formula:



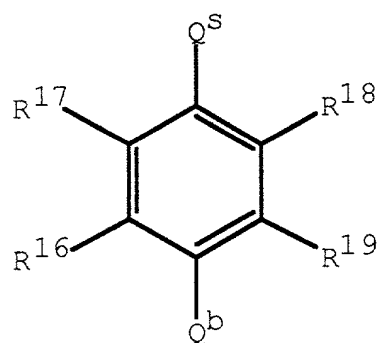
(I-MPS) and



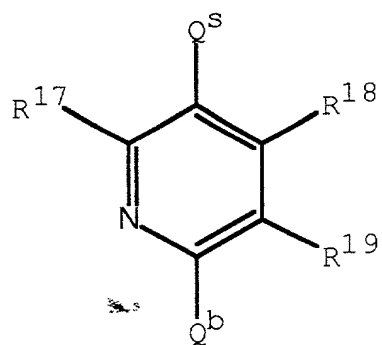
(I-FARMPS)

or a pharmaceutically acceptable salt thereof, have common structural units, wherein;

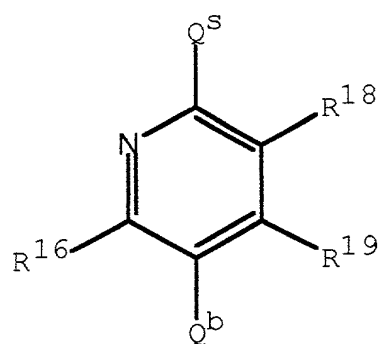
- 5  $Y^0$  is selected from the group of formulas consisting of:



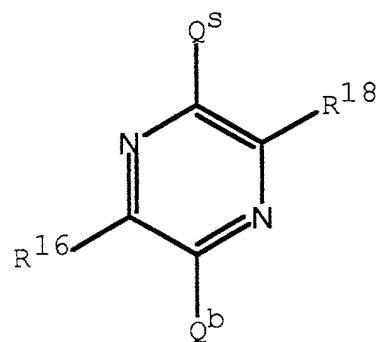
1- $Q^b$ -4- $Q^s$ -2- $R^{16}$ -3- $R^{17}$ -5- $R^{18}$ -6- $R^{19}$  benzene,



2-Q<sup>b</sup>-5-Q<sup>s</sup>-6-R<sup>17</sup>-4-R<sup>18</sup>-3-R<sup>19</sup> pyridine,

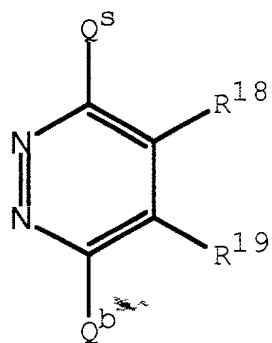


3-Q<sup>b</sup>-6-Q<sup>s</sup>-2-R<sup>16</sup>-5-R<sup>18</sup>-4-R<sup>19</sup> pyridine,

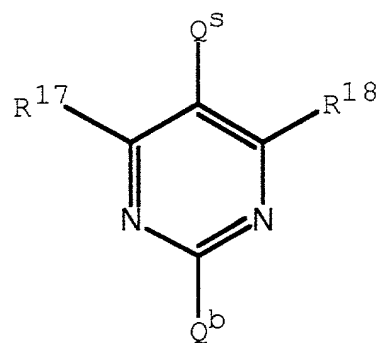


2-Q<sup>b</sup>-5-Q<sup>s</sup>-3-R<sup>16</sup>-6-R<sup>18</sup> pyrazine,

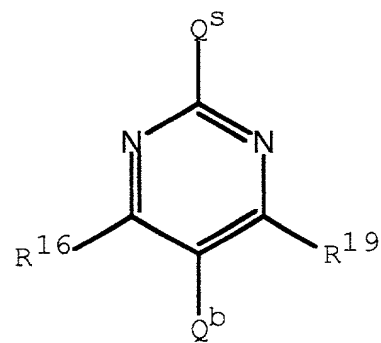
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3- $Q^b$ -6- $Q^s$ -2- $R^{18}$ -5- $R^{18}$ -4- $R^{19}$  pyridazine,

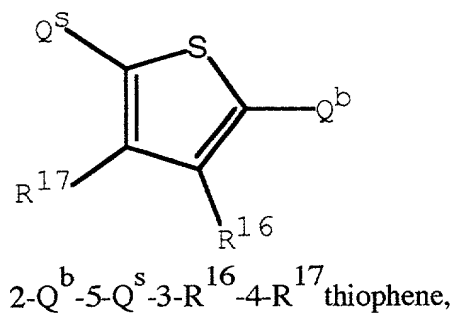
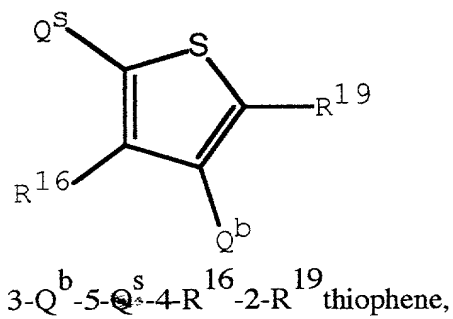


2- $Q^b$ -5- $Q^s$ -4- $R^{17}$ -6- $R^{18}$  pyrimidine,

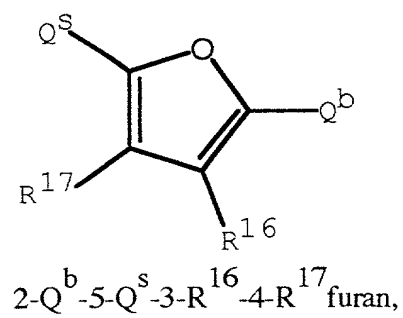
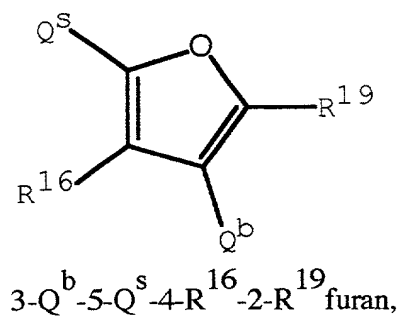


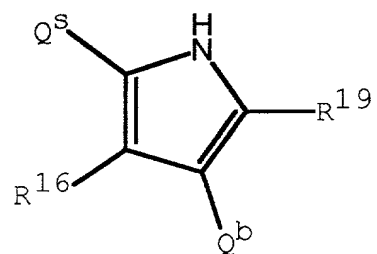
5- $Q^b$ -2- $Q^s$ -4- $R^{16}$ -6- $R^{19}$  pyrimidine,

5

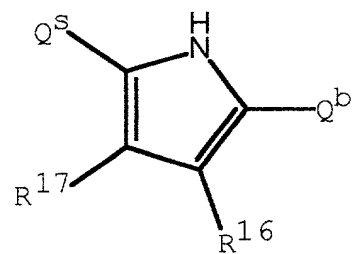


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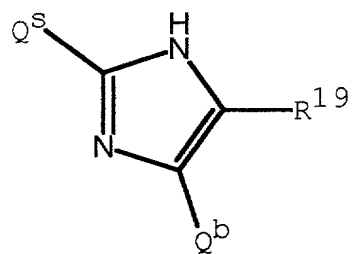




3- $Q^b$ -5- $Q^s$ -4- $R^{16}$ -2- $R^{19}$  pyrrole,

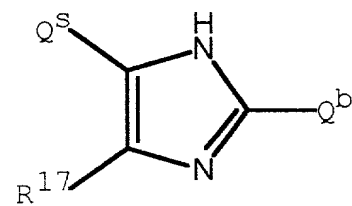


2- $Q^b$ -5- $Q^s$ -3- $R^{16}$ -4- $R^{17}$  pyrrole,

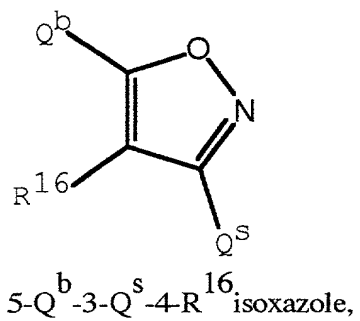
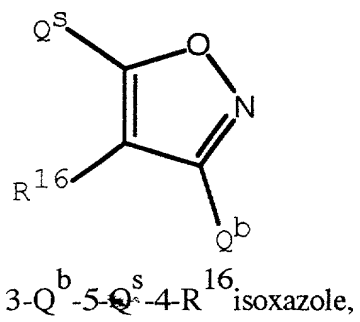


4- $Q^b$ -2- $Q^s$ -5- $R^{19}$  imidazole,

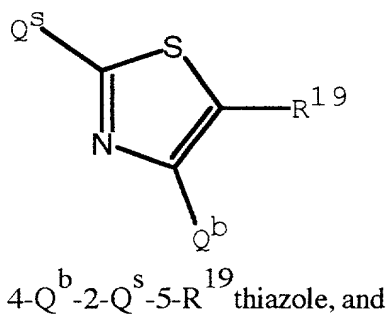
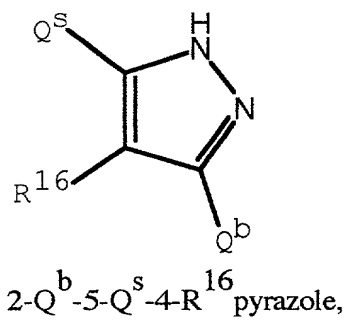
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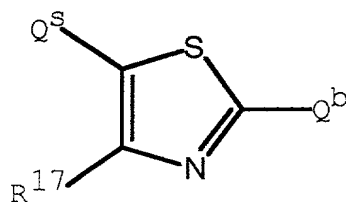
2- $Q^b$ -4- $Q^s$ -5- $R^{17}$  imidazole,



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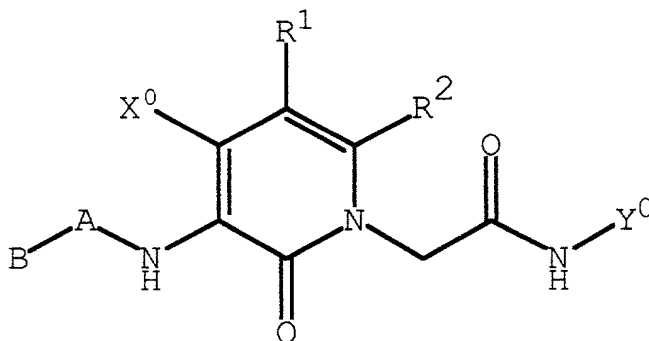
2- $Q^b$ -5- $Q^s$ -4- $R^{17}$  thiazole;

$R^{16}$ ,  $R^{17}$ ,  $R^{18}$ , and  $R^{19}$  are independently selected from the group

- consisting of hydrido, methyl, ethyl, isopropyl, propyl, carboxy, amidino,  
 5 guanidino, methoxy, ethoxy, isopropoxy, propoxy, hydroxy, amino,  
 aminomethyl, 1-aminoethyl, 2-aminoethyl, N-methylamino, dimethylamino, N-  
 ethylamino, methylthio, ethylthio, isopropylthio, trifluoromethylthio,  
 methylsulfinyl, ethylsulfinyl, methylsulfonyl, ethylsulfonyl, trifluoromethyl,  
 pentafluoroethyl, 2,2,2-trifluoroethyl, 2,2,3,3,3-pentafluoropropyl,  
 10 trifluoromethoxy, 1,1,2,2-tetrafluoroethoxy, fluoro, chloro, bromo,  
 hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl, and cyano;

$Q^s$  is selected from the group consisting of a single covalent bond,  $CH_2$ ,  
 and  $CH_2CH_2$ .

- In a most preferred specific embodiment of Formula I, compounds have  
 15 the Formula I-EMPS wherein B is an aromatic:



(I-EMPS wherein B is aromatic)

or a pharmaceutically acceptable salt thereof, wherein;

- B is selected from the group consisting of phenyl, 2-thienyl, 3-thienyl,  
 20 2-furyl, 3-furyl, 2-pyrrolyl, 3-pyrrolyl, 2-imidazolyl, 4-imidazolyl, 3-pyrazolyl,  
 4-pyrazolyl, 2-thiazolyl, 3-isoxazolyl, and 5-isoxazolyl, wherein a carbon  
 adjacent to the carbon at the point of attachment is optionally substituted by



$R^{32}$ , the other carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^{36}$ , a carbon adjacent to  $R^{32}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{33}$ , a carbon adjacent to  $R^{36}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{35}$ , and any carbon adjacent to both  $R^{33}$  and  $R^{35}$  is optionally substituted by  $R^{34}$ ;

$R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$  are independently selected from the group consisting of hydrido, amidino, guanidino, methyl, ethyl, methoxy, ethoxy, hydroxy, amino, N-methylamino, dimethylamino, methoxyamino, methylthio, ethylthio, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, fluoro, chloro, bromo, amidosulfonyl, N-methylamidodisulfonyl, hydroxymethyl, amidocarbonyl, carboxy, cyano, and  $Q^b$ ;

A is selected from the group consisting of single covalent bond, NH,  $N(CH_3)$ ,  $CH_2$ ,  $CH_3CH$ , and  $CH_2CH_2$ ;

$X^o$  is selected from the group consisting of hydrido, hydroxy, amino, amidino, aminomethyl, cyano, methyl, trifluoromethyl, hydroxymethyl, chloro, and fluoro;

$R^1$  is selected from the group consisting of hydrido, hydroxy, hydroxymethyl, amino, aminomethyl, methylamino, cyano, methyl, trifluoromethyl, methoxy, methylthio, trifluoromethoxy, fluoro, and chloro;

$R^2$  is  $Z^0-Q$ ;

$Z^0$  is selected from the group consisting of covalent single bond, O, S, NH,  $OCH_2$ ,  $SCH_2$ , and  $N(H)CH_2$ ;

Q is selected from the group consisting of phenyl, 2-thienyl, 2-furyl, 2-pyrrolyl, 2-imidazolyl, 2-thiazolyl, 3-isoxazolyl, 2-pyridyl, and 3-pyridyl, wherein a carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^9$ , the other carbon adjacent to the carbon at the point of

attachment is optionally substituted by  $R^{13}$ , a carbon adjacent to  $R^9$  and two  
atoms from the carbon at the point of attachment is optionally substituted by  
 $R^{10}$ , a carbon adjacent to  $R^{13}$  and two atoms from the carbon at the point of  
attachment is optionally substituted by  $R^{12}$ , and any carbon adjacent to both  
5  $R^{10}$  and  $R^{12}$  is optionally substituted by  $R^{11}$ , with the proviso that Q is other  
than a phenyl when  $Z^0$  is a covalent single bond;

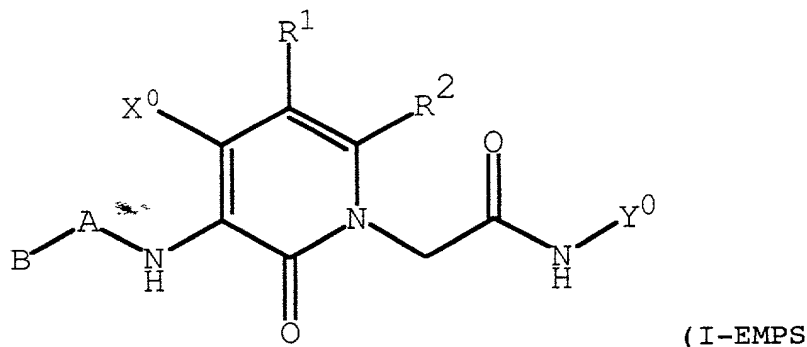
$R^9$ ,  $R^{11}$ , and  $R^{13}$  are independently selected from the group consisting  
of hydrido, methyl, ethyl, methoxy, ethoxy, hydroxy, amino, N-methylamino,  
N,N-dimethylamino, methylthio, trifluoromethyl, pentafluoroethyl, 2,2,2-  
10 trifluoroethyl, fluoro, chloro, bromo, amidosulfonyl, N-methylamidodisulfonyl,  
N,N-dimethylamidodisulfonyl, hydroxymethyl, 1-hydroxyethyl, amidocarbonyl,  
N-methylamidocarbonyl, carboxy, and cyano;

$R^{10}$  and  $R^{12}$  are independently selected from the group consisting of  
hydrido, amidino, amidocarbonyl, N-benzylamidocarbonyl, N-(2-  
15 chlorobenzyl)amidocarbonyl, N-(3-fluorobenzyl)amidocarbonyl, N-(2-  
trifluoromethylbenzyl)amidocarbonyl, N-(1-phenylethyl)amidocarbonyl, N-(1-  
methyl-1-phenylethyl)amidocarbonyl, N-benzylamidodisulfonyl, N-(2-  
chlorobenzyl)amidodisulfonyl, N-ethylamidocarbonyl, N-  
isopropylamidocarbonyl, N-propylamidocarbonyl, N-isobutylamidocarbonyl,  
20 N-(2-butyl)amidocarbonyl, N-cyclobutylamidocarbonyl, N-  
cyclopentylamidocarbonyl, N-cyclohexylamidocarbonyl, guanidino, methyl,  
ethyl, methoxy, ethoxy, hydroxy, hydroxymethyl, 1-hydroxyethyl, 2-  
hydroxyethyl, carboxy, carboxymethyl, amino, acetamido, trifluoromethyl,  
pentafluoroethyl, 2,2,2-trifluoroethyl, trifluoroacetamido, aminomethyl, N-  
25 methylamino, dimethylamino, methoxyamino, amidosulfonyl, N-  
methylamidodisulfonyl, N,N-dimethylamidodisulfonyl, methanesulfonamido,  
methoxycarbonyl, fluoro, chloro, bromo, and cyano;

$Q^b$  is  $NR^{20}R^{21}$  or  $C(NR^{25})NR^{23}R^{24}$ ;

$R^{20}$ ,  $R^{21}$ ,  $R^{23}$ ,  $R^{24}$ , and  $R^{25}$  are independently selected from the group  
30 consisting of hydrido, methyl, and ethyl.

In another most preferred specific embodiment of Formula I, compounds have the Formula I-EMPS wherein B is a non-cyclic substituent:



wherein B is a non-cyclic substituent)

5 or a pharmaceutically acceptable salt thereof, wherein;

B is selected from the group consisting of hydrido, ethyl, 2-propenyl, 2-propynyl, propyl, isopropyl, butyl, 2-butenyl, 2-butylnyl, sec-butyl, *tert*-butyl, isobutyl, 2-methylpropenyl, 1-pentyl, 2-pentenyl, 3-pentenyl, 2-pentynyl, 3-pentynyl, 2-pentyl, 3-pentyl, 2-methylbutyl, 2-methyl-2-butenyl, 3-methylbutyl, 10 3-methyl-2-butenyl, 1-hexyl, 2-hexenyl, 3-hexenyl, 4-hexenyl, 2-hexynyl, 3-hexynyl, 4-hexynyl, 2-hexyl, 1-methyl-2-pentenyl, 1-methyl-3-pentenyl, 1-methyl-2-pentynyl, 1-methyl-3-pentynyl, 3-hexyl, 1-ethyl-2-butenyl, 1-heptyl, 2-heptenyl, 3-heptenyl, 4-heptenyl, 5-heptenyl, 2-heptynyl, 3-heptynyl, 4-heptynyl, 5-heptynyl, 2-heptyl, 1-methyl-2-hexenyl, 1-methyl-3-hexenyl, 1-methyl-4-hexenyl, 1-methyl-2-hexynyl, 1-methyl-3-hexynyl, 1-methyl-4-hexynyl, 3-heptyl, 1-ethyl-2-pentenyl, 1-ethyl-3-pentenyl, 1-ethyl-2-pentynyl, 1-ethyl-3-pentynyl, 2,2,2-trifluoroethyl, 2,2-difluoropropyl, 4-trifluoromethyl-5,5,5-trifluoropentyl, 4-trifluoromethylpentyl, 5,5,6,6,6-pentafluorohexyl, and 3,3,3-trifluoropropyl, wherein each member of group B is optionally substituted 15 at any carbon up to and including 5 atoms from the point of attachment of B to A with one or more of the group consisting of R<sup>32</sup>, R<sup>33</sup>, R<sup>34</sup>, R<sup>35</sup>, and R<sup>36</sup>;

R<sup>32</sup>, R<sup>33</sup>, R<sup>34</sup>, R<sup>35</sup>, and R<sup>36</sup> are independently selected from the group consisting of hydrido, amidino, guanidino, methyl, ethyl, methoxy, ethoxy, hydroxy, amino, N-methylamino, dimethylamino, methoxyamino, 20 methylthio, ethylthio, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl,

fluoro, chloro, bromo, amidosulfonyl, N-methylamidosulfonyl, hydroxymethyl, amidocarbonyl, carboxy, cyano, and  $Q^b$ ;

A is selected from the group consisting of single covalent bond, NH,  $N(CH_3)$ ,  $CH_2$ ,  $CH_3CH$ , and  $CH_2CH_2$ ;

- 5           A is optionally selected from the group consisting of  $CH_2N(CH_3)$ ,  $CH_2N(CH_2CH_3)$ ,  $CH_2CH_2N(CH_3)$ , and  $CH_2CH_2N(CH_2CH_3)$  with the proviso that B is hydrido;

- 10            $X^O$  is selected from the group consisting of hydrido, hydroxy, amino, amidino, aminomethyl, cyano, methyl, trifluoromethyl, hydroxymethyl, chloro, and fluoro;

$R^1$  is selected from the group consisting of hydrido, hydroxy, hydroxymethyl, amino, aminomethyl, methylamino, cyano, methyl, trifluoromethyl, methoxy, methylthio, trifluoromethoxy, fluoro, and chloro;

$R^2$  is  $Z^0-Q$ ;

- 15            $Z^0$  is a covalent single bond;

Q is selected from the group consisting of phenyl, 2-thienyl, 2-furyl, 2-pyrrolyl, 2-imidazolyl, 2-thiazolyl, 3-isoxazolyl, 2-pyridyl, and 3-pyridyl, wherein a carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^9$ , the other carbon adjacent to the carbon at the point of

- 20           attachment is optionally substituted by  $R^{13}$ , a carbon adjacent to  $R^9$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{10}$ , a carbon adjacent to  $R^{13}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{12}$ , and any carbon adjacent to both  $R^{10}$  and  $R^{12}$  is optionally substituted by  $R^{11}$ , with the proviso that Q is other than a phenyl when  $Z^0$  is a covalent single bond;
- 25

$R^9$ ,  $R^{11}$ , and  $R^{13}$  are independently selected from the group consisting of hydrido, methyl, ethyl, methoxy, ethoxy, hydroxy, amino, N-methylamino,

N,N-dimethylamino, methylthio, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, fluoro, chloro, bromo, amidosulfonyl, N-methylamidosulfonyl, N,N-dimethylamidosulfonyl, hydroxymethyl, 1-hydroxyethyl, amidocarbonyl, N-methylamidocarbonyl, carboxy, and cyano;

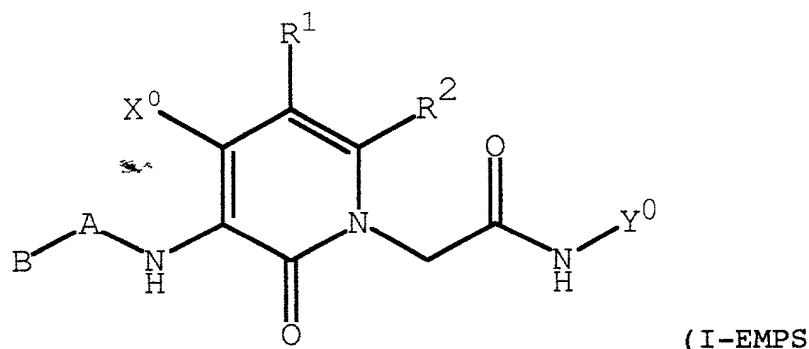
- 5  $R^{10}$  and  $R^{12}$  are independently selected from the group consisting of hydrido, amidino, amidocarbonyl, N-methylamidocarbonyl, N-benzylamidocarbonyl, N-(2-chlorobenzyl)amidocarbonyl, N-(3-fluorobenzyl)amidocarbonyl, N-(2-trifluoromethylbenzyl)amidocarbonyl, N-(1-phenylethyl)amidocarbonyl, N-(1-methyl-1-phenylethyl)amidocarbonyl, N-benzylamidosulfonyl, N-(2-chlorobenzyl)amidosulfonyl, N-ethylamidocarbonyl, N-isopropylamidocarbonyl, N-propylamidocarbonyl, N-isobutylamidocarbonyl, N-(2-butyl)amidocarbonyl, N-cyclobutylamidocarbonyl, N-cyclopentylamidocarbonyl, N-cyclohexylamidocarbonyl, guanidino, methyl, ethyl, methoxy, ethoxy, hydroxy, 10 hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl, carboxy, carboxymethyl, amino, acetamido, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, trifluoroacetamido, aminomethyl, N-methylamino, dimethylamino, methoxyamino, amidosulfonyl, N-methylamidosulfonyl, N,N-dimethylamidosulfonyl, methanesulfonamido, methoxycarbonyl, fluoro, chloro, 20 bromo, and cyano;

$Q^b$  is selected from the group consisting of  $NR^{20}R^{21}$ ,  $C(NR^{25})NR^{23}R^{24}$ , and  $N(R^{26})C(NR^{25})N(R^{23})(R^{24})$ , with the proviso that said  $Q^b$  group is bonded directly to a carbon atom;

- $R^{20}$ ,  $R^{21}$ ,  $R^{23}$ ,  $R^{24}$ ,  $R^{25}$ , and  $R^{26}$  are independently selected from the 25 group consisting of hydrido, methyl, and ethyl.

30

In still another most preferred specific embodiment of Formula I, compounds have the Formula I-EMPS wherein B is a non-aromatic cyclic substituent:



- 5 wherein B is a non-aromatic cyclic substituent)  
or a pharmaceutically acceptable salt thereof, wherein;

- B is selected from the group consisting of cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, cycloheptyl, oxalan-2-yl, 2-(2R)-bicyclo[2.2.1]-heptyl, oxetan-3-yl, azetidin-1-yl, azetidin-2-yl, azetidin-3-yl, bicyclo[3.1.0]hexan-6-yl,  
10 2-morpholinyl, 3-morpholinyl, 4-morpholinyl, 1-piperazinyl, 2-piperazinyl, 1-piperidinyl, 2-piperidinyl, 3-piperidinyl, 4-piperidinyl, 1-pyrrolidinyl, 2-pyrrolidinyl, 3-pyrrolidinyl, 2-dioxanyl, 2-tetrahydrofuranyl, 3-tetrahydrofuranyl, 2-tetrahydropyranyl, 3-tetrahydropyranyl, 4-tetrahydropyranyl, 2-tetrahydrothienyl, and 3-tetrahydrothienyl, wherein each  
15 ring carbon is optionally substituted with R<sup>33</sup>, ring carbons and a nitrogen adjacent to the carbon atom at the point of attachment are optionally substituted with R<sup>9</sup> or R<sup>13</sup>, a ring carbon or nitrogen adjacent to the R<sup>9</sup> position and two atoms from the point of attachment are optionally substituted with R<sup>10</sup>, and a ring carbon or nitrogen atom adjacent to the R<sup>13</sup> position and two atoms from  
20 the point of attachment is optionally substituted with R<sup>12</sup>;

R<sup>9</sup>, R<sup>11</sup>, and R<sup>13</sup> are independently selected from the group consisting of hydrido, methyl, ethyl, methoxy, ethoxy, hydroxy, amino, N-methylamino, N,N-dimethylamino, methylthio, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, fluoro, chloro, bromo, amidosulfonyl, N-methylamidulosulfonyl,

N,N-dimethylamidosulfonyl, hydroxymethyl, 1-hydroxyethyl, amidocarbonyl, N-methylamidocarbonyl, carboxy, and cyano;

$R^{10}$  and  $R^{12}$  are independently selected from the group consisting of

- hydrido, amidino, amidocarbonyl, N-methylamidocarbonyl, N-  
 5 benzylamidocarbonyl, N-(2-chlorobenzyl)amidocarbonyl, N-(3-fluorobenzyl)amidocarbonyl, N-(2-trifluoromethylbenzyl)amidocarbonyl, N-(1-phenylethyl)amidocarbonyl, N-(1-methyl-1-phenylethyl)amidocarbonyl, N-benzylamidosulfonyl, N-(2-chlorobenzyl)amidosulfonyl, N-ethylamidocarbonyl, N-isopropylamidocarbonyl, N-propylamidocarbonyl, N-  
 10 isobutylamidocarbonyl, N-(2-butyl)amidocarbonyl, N-cyclobutylamidocarbonyl, N-cyclopentylamidocarbonyl, N-cyclohexylamidocarbonyl, guanidino, methyl, ethyl, methoxy, ethoxy, hydroxy, hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl, carboxy, carboxymethyl, amino, acetamido, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, trifluoroacetamido, aminomethyl, N-methylamino, dimethylamino, methoxyamino, amidosulfonyl, N-methylamidosulfonyl, N,N-dimethylamidosulfonyl, methanesulfonamido, methoxycarbonyl, fluoro, chloro, bromo, and cyano;

$R^{33}$  is selected from the group consisting of hydrido, amidino,

- 20 guanidino, methyl, ethyl, methoxy, ethoxy, hydroxy, amino, N-methylamino, dimethylamino, methoxyamino, methylthio, ethylthio, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, fluoro, chloro, bromo, amidosulfonyl, N-methylamidosulfonyl, hydroxymethyl, amidocarbonyl, carboxy, cyano, and  $Q^b$ ;

A is selected from the group consisting of single covalent bond, NH,

- 25  $N(CH_3)$ ,  $CH_2$ ,  $CH_3CH$ ,  $CH_2CH_2$ , and  $CH_2CH_2CH_2$ ;

$X^O$  is selected from the group consisting of hydrido, hydroxy, amino, amidino, aminomethyl, cyano, methyl, trifluoromethyl, hydroxymethyl, chloro, and fluoro;

$R^1$  is selected from the group consisting of hydrido, hydroxy,

- 30 hydroxymethyl, amino, aminomethyl, methylamino, cyano, methyl, trifluoromethyl, methoxy, methylthio, trifluoromethoxy, fluoro, and chloro;

$R^2$  is  $Z^0-Q$ ;

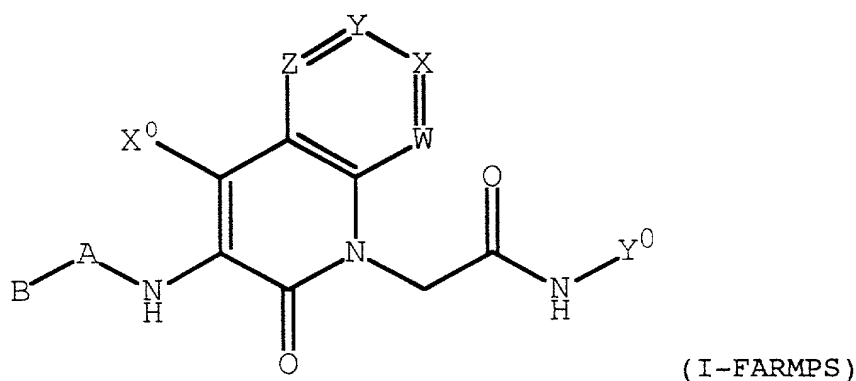
$Z^0$  is selected from the group consisting of covalent single bond, O, S, NH,  $OCH_2$ ,  $SCH_2$ , and  $N(H)CH_2$ ;

- Q is selected from the group consisting of phenyl, 2-thienyl, 2-furyl, 2-pyrrolyl, 2-imidazolyl, 2-thiazolyl, 3-isoxazolyl, 2-pyridyl, and 3-pyridyl, wherein a carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^9$ ; the other carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^{13}$ , a carbon adjacent to  $R^9$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{10}$ , a carbon adjacent to  $R^{13}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{12}$ , and any carbon adjacent to both  $R^{10}$  and  $R^{12}$  is optionally substituted by  $R^{11}$ , with the proviso that Q is other than a phenyl when  $Z^0$  is a covalent single bond;

$Q^b$  is  $NR^{20}R^{21}$  or  $C(NR^{25})NR^{23}R^{24}$ ;

- $R^{20}$ ,  $R^{21}$ ,  $R^{23}$ ,  $R^{24}$ , and  $R^{25}$  are independently selected from the group consisting of hydrido, methyl, and ethyl.

In a further most preferred embodiment of compounds of Formula I, compounds have the Formula I-FARMPS wherein there are two fused aromatic rings:



- or a pharmaceutically acceptable salt thereof, wherein;

B is selected from the group consisting of phenyl, 2-thienyl, 3-thienyl, 2-furyl, 3-furyl, 2-pyrrolyl, 3-pyrrolyl, 2-imidazolyl, 4-imidazolyl, 3-pyrazolyl,



- 4-pyrazolyl, 2-thiazolyl, 3-isoxazolyl, and 5-isoxazolyl, wherein a carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^{32}$ , the other carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^{36}$ , a carbon adjacent to  $R^{32}$  and two atoms from the
- 5 carbon at the point of attachment is optionally substituted by  $R^{33}$ , a carbon adjacent to  $R^{36}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{35}$ , and any carbon adjacent to both  $R^{33}$  and  $R^{35}$  is optionally substituted by  $R^{34}$ ;

$R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$  are independently selected from the

- 10 group consisting of hydrido, amidino, guanidino, methyl, ethyl, methoxy, ethoxy, hydroxy, amino, N-methylamino, dimethylamino, methoxyamino, methylthio, ethylthio, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, fluoro, chloro, bromo, amidosulfonyl, N-methylamidosulfonyl, hydroxymethyl, amidocarbonyl, carboxy, cyano, and  $Q^b$ ;
- 15 B is selected from the group consisting of hydrido, ethyl, 2-propenyl, 2-propynyl, propyl, isopropyl, butyl, 2-butenyl, 2-butyne, sec-butyl, *tert*-butyl, isobutyl, 2-methylpropenyl, 1-pentyl, 2-pentenyl, 3-pentenyl, 2-pentyne, 3-pentyne, 2-pentyl, 3-pentyl, 2-methylbutyl, 2-methyl-2-butenyl, 3-methylbutyl, 3-methyl-2-butenyl, 1-hexyl, 2-hexenyl, 3-hexenyl, 4-hexenyl, 2-hexynyl, 3-
- 20 hexynyl, 4-hexynyl, 2-hexyl, 1-methyl-2-pentenyl, 1-methyl-3-pentenyl, 1-methyl-2-pentyne, 1-methyl-3-pentyne, 3-hexyl, 1-ethyl-2-butenyl, 1-heptyl, 2-heptenyl, 3-heptenyl, 4-heptenyl, 5-heptenyl, 2-heptyne, 3-heptyne, 4-heptyne, 5-heptyne, 2-heptyl, 1-methyl-2-hexenyl, 1-methyl-3-hexenyl, 1-methyl-4-hexenyl, 1-methyl-2-hexynyl, 1-methyl-3-hexynyl, 1-methyl-4-
- 25 hexynyl, 3-heptyl, 1-ethyl-2-pentenyl, 1-ethyl-3-pentenyl, 1-ethyl-2-pentyne, 1-ethyl-3-pentyne, 2,2,2-trifluoroethyl, 2,2-difluoropropyl, 4-trifluoromethyl-5,5,5-trifluoropentyl, 4-trifluoromethylpentyl, 5,5,6,6,6-pentafluorohexyl, and 3,3,3-trifluoropropyl, wherein each member of group B is optionally substituted

at any carbon up to and including 5 atoms from the point of attachment of B to A with one or more of the group consisting of  $R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$ ;

B is selected from the group consisting of cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, cycloheptyl, oxalan-2-yl, 2-(2R)-bicyclo[2.2.1]-heptyl, oxetan-3-yl, azetidin-1-yl, azetidin-2-yl, azetidin-3-yl, bicyclo[3.1.0]hexan-6-yl, 2-morpholinyl, 3-morpholinyl, 4-morpholinyl, 1-piperazinyl, 2-piperazinyl, 1-piperidinyl, 2-piperidinyl, 3-piperidinyl, 4-piperidinyl, 1-pyrrolidinyl, 2-pyrrolidinyl, 3-pyrrolidinyl, 2-dioxanyl, 2-tetrahydrofuranyl, 3-tetrahydrofuranyl, 2-tetrahydropyranyl, 3-tetrahydropyranyl, 4-tetrahydropyranyl, 2-tetrahydrothienyl, and 3-tetrahydrothienyl, wherein each ring carbon is optionally substituted with  $R^{33}$ , ring carbons and a nitrogen adjacent to the carbon atom at the point of attachment are optionally substituted with  $R^9$  or  $R^{13}$ , a ring carbon or nitrogen adjacent to the  $R^9$  position and two atoms from the point of attachment are optionally substituted with  $R^{10}$ , and a ring carbon or nitrogen atom adjacent to the  $R^{13}$  position and two atoms from the point of attachment is optionally substituted with  $R^{12}$ ;

$R^9$  and  $R^{13}$  are independently selected from the group consisting of hydrido, methyl, ethyl, methoxy, ethoxy, hydroxy, amino, N-methylamino, N,N-dimethylamino, methylthio, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, fluoro, chloro, bromo, amidosulfonyl, N-methylamidodisulfonyl, N,N-dimethylamidodisulfonyl, hydroxymethyl, 1-hydroxyethyl, amidocarbonyl, N-methylamidocarbonyl, carboxy, and cyano;

$R^{10}$  and  $R^{12}$  are independently selected from the group consisting of hydrido, amidino, amidocarbonyl, N-methylamidocarbonyl, N-benzylamidocarbonyl, N-(2-chlorobenzyl)amidocarbonyl, N-(3-fluorobenzyl)amidocarbonyl, N-(2-trifluoromethylbenzyl)amidocarbonyl, N-(1-phenylethyl)amidocarbonyl, N-(1-methyl-1-phenylethyl)amidocarbonyl, N-benzylamidodisulfonyl, N-(2-chlorobenzyl)amidodisulfonyl, N-ethylamidocarbonyl, N-isopropylamidocarbonyl, N-propylamidocarbonyl, N-isobutylamidocarbonyl, N-(2-butyl)amidocarbonyl, N-

- cyclobutylamidocarbonyl, N-cyclopentylamidocarbonyl, N-cyclohexylamidocarbonyl, guanidino, methyl, ethyl, methoxy, ethoxy, hydroxy, hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl, carboxy, carboxymethyl, amino, acetamido, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, trifluoroacetamido, aminomethyl, N-methylamino, dimethylamino, methoxyamino, amidosulfonyl, N-methylamidosulfonyl, N,N-dimethylamidosulfonyl, methanesulfonamido, methoxycarbonyl, fluoro, chloro, bromo, and cyano;

- A is selected from the group consisting of single covalent bond, NH, N(CH<sub>3</sub>), CH<sub>2</sub>, CH<sub>3</sub>CH, and CH<sub>2</sub>CH<sub>2</sub>;

A is optionally selected from the group consisting of CH<sub>2</sub>N(CH<sub>3</sub>), CH<sub>2</sub>N(CH<sub>2</sub>CH<sub>3</sub>), CH<sub>2</sub>CH<sub>2</sub>N(CH<sub>3</sub>), and CH<sub>2</sub>CH<sub>2</sub>N(CH<sub>2</sub>CH<sub>3</sub>) with the proviso that B is hydrido;

- X<sup>O</sup> is selected from the group consisting of hydrido, hydroxy, amino, amidino, aminomethyl, cyano, methyl, trifluoromethyl, hydroxymethyl, chloro, and fluoro;

W and Z are independently selected from the group consisting of CH, N, CF, CCl, C-CN, C-NH<sub>2</sub>, C-CH<sub>2</sub>NH<sub>2</sub>, C-NHCH<sub>3</sub>, C-OH, C-CH<sub>2</sub>OH, C-CO<sub>2</sub>H, and C-C(O)NH<sub>2</sub>;

- X and Y are independently selected from the group consisting of CH, N, CF, C-CN, C-CH<sub>3</sub>, C-NH<sub>2</sub>, C-CH<sub>2</sub>NH<sub>2</sub>, C-CH<sub>2</sub>NHCH<sub>3</sub>, C-NHCH<sub>3</sub>, C-CH(NH<sub>2</sub>)CH<sub>3</sub>, C-CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>, C-NHOCH<sub>3</sub>, C-C(NH)NH<sub>2</sub>, C-C(NOH)NH<sub>2</sub>, C-OH, C-CH<sub>2</sub>OH, C-CH<sub>2</sub>CH<sub>2</sub>OH, C-CH(OH)CH<sub>3</sub>, C-OCH<sub>3</sub>, C-CO<sub>2</sub>H, C-C(O)NH<sub>2</sub>, C-C(O)NHCH<sub>3</sub>, C-CH<sub>2</sub>CO<sub>2</sub>H, N-benzylamidocarbonyl-C, N-(2-chlorobenzyl)amidocarbonyl-C, N-(3-fluorobenzyl)amidocarbonyl-C, N-(2-trifluoromethylbenzyl)amidocarbonyl-C, N-(1-phenylethyl)amidocarbonyl-C, N-(1-methyl-1-phenylethyl)amidocarbonyl-C, N-benzylamidosulfonyl-C, N-(2-chlorobenzyl)amidosulfonyl-C, N-ethylamidocarbonyl-C, N-isopropylamidocarbonyl-C, N-propylamidocarbonyl-C,

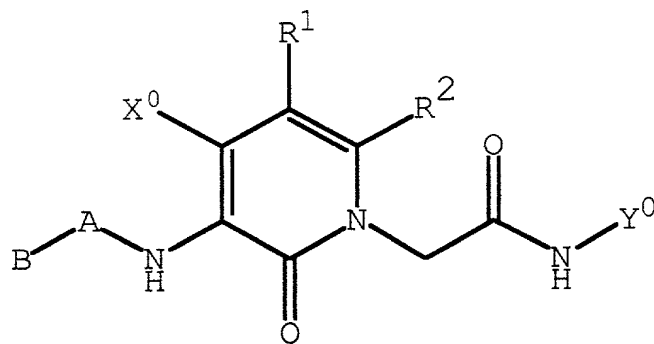
N-isobutylamidocarbonyl-C, N-(2-butyl)amidocarbonyl-C,  
N-cyclobutylamidocarbonyl-C, N-cyclopentylamidocarbonyl-C,  
N-cyclohexylamidocarbonyl-C;

$Q^b$  is selected from the group consisting of  $NR^{20}R^{21}$ ,

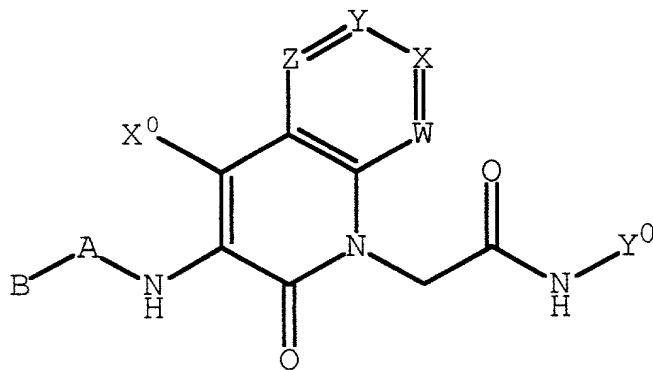
- 5  $C(NR^{25})NR^{23}R^{24}$ , and  $N(R^{26})C(NR^{25})N(R^{23})(R^{24})$ , with the proviso that  
said  $Q^b$  group is bonded directly to a carbon atom;

$R^{20}$ ,  $R^{21}$ ,  $R^{23}$ ,  $R^{24}$ ,  $R^{25}$ , and  $R^{26}$  are independently selected from the  
group consisting of hydrido, methyl, and ethyl.

- 10 The most preferred specific embodiment (I-EMPS) compounds of the  
present invention having the Formula:



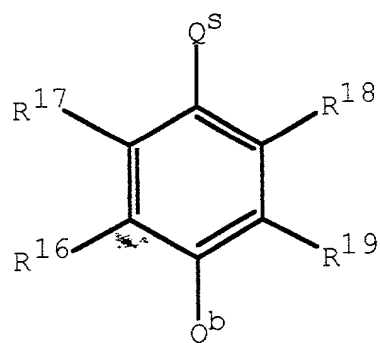
(I-MPS) and



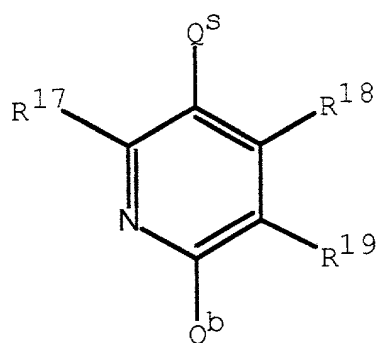
(I-FARMPS)

or a pharmaceutically acceptable salt thereof, have common structural units,  
wherein;

$Y^0$  is selected from the group of formulas consisting of:

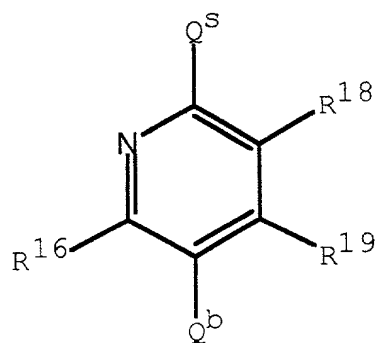


1- $Q^b$ -4- $Q^s$ -2- $R^{16}$ -3- $R^{17}$ -5- $R^{18}$ -6- $R^{19}$  benzene,

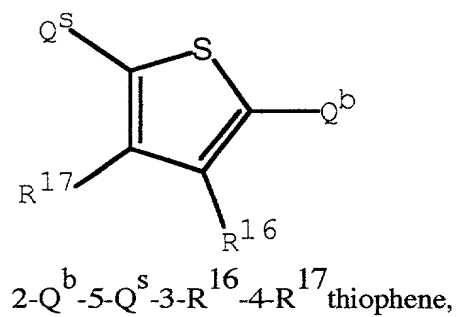
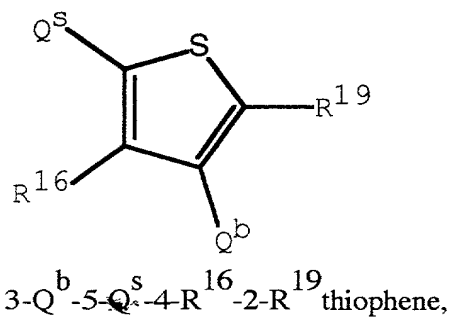


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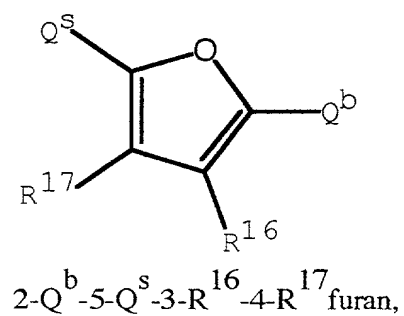
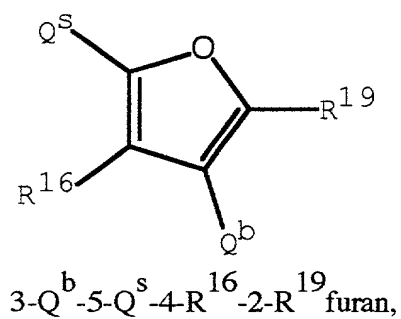
2- $Q^b$ -5- $Q^s$ -6- $R^{17}$ -4- $R^{18}$ -3- $R^{19}$  pyridine,

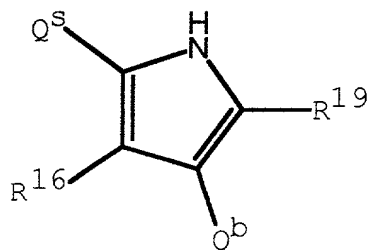


3- $Q^b$ -6- $Q^s$ -2- $R^{16}$ -5- $R^{18}$ -4- $R^{19}$  pyridine,

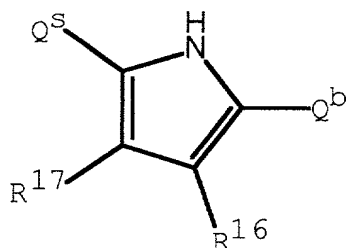


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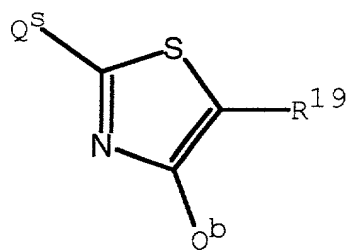




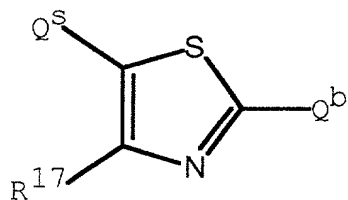
3- $Q^b$ -5- $Q^s$ -4- $R^{16}$ -2- $R^{19}$  pyrrole,



2- $Q^b$ -5- $Q^s$ -3- $R^{16}$ -4- $R^{17}$  pyrrole,



4- $Q^b$ -2- $Q^s$ -5- $R^{19}$  thiazole, and



2- $Q^b$ -5- $Q^s$ -4- $R^{17}$  thiazole;

$R^{16}$ ,  $R^{17}$ ,  $R^{18}$ , and  $R^{19}$  are independently selected from the group

- 10 consisting of hydrido, methyl, ethyl, amidino, guanidino, methoxy, hydroxy, amino, aminomethyl, 1-aminoethyl, 2-aminoethyl, N-methylamino, dimethylamino, methylthio, ethylthio, trifluoromethylthio, methylsulfinyl,

methylsulfonyl, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, trifluoromethoxy, fluoro, chloro, hydroxymethyl, carboxy, and cyano;

$Q^S$  is  $CH_2$ .

The compounds of this invention can be used in anticoagulant therapy for the treatment and prevention of a variety of thrombotic conditions including coronary artery and cerebrovascular disease. The compounds of this invention can be used to inhibit serine protease associated with the coagulation cascade and factors II, VII, VIII, IX, X, XI, or XII. The compounds of the invention can inhibit the formation of blood platelet aggregates, inhibit the formation of fibrin, inhibit thrombus formation, and inhibiting embolus formation in a mammal, in blood, in blood products, and in mammalian organs. The compounds also can be used for treating or preventing unstable angina, refractory angina, myocardial infarction, transient ischemic attacks, atrial fibrillation, thrombotic stroke, embolic stroke, deep vein thrombosis, disseminated intravascular coagulation, ocular build up of fibrin, and reocclusion or restenosis of recanalized vessels in a mammal. The compounds can also be used in prophylactic treatment of subjects who are at risk of developing such disorders. The compounds can be used to lower the risk of atherosclerosis. The compounds of Formula (I) would also be useful in prevention of cerebral vascular accident (CVA) or stroke.

Besides being useful for human treatment, these compounds are also useful for veterinary treatment of companion animals, exotic animals and farm animals, including mammals, rodents, and the like. More preferred animals include horses, dogs, and cats.

In yet another embodiment of the present invention, the novel compounds are selected from the compounds set forth in **Examples 1** through **Example 29** and **Example Table 1**.

The use of generic terms in the description of the compounds are herein defined for clarity.

Standard single letter elemental symbols are used to represent specific types of atoms unless otherwise defined. The symbol "C" represents a carbon atom. The symbol "O" represents an oxygen atom. The symbol "N" represents a nitrogen atom unless used as a prefix before a substituent on an amine or amide. The symbol "P" represents a phosphorus atom. The symbol "S" represents a sulfur atom. The symbol "H" represents a hydrido atom. Double letter elemental



symbols are used as defined for the elements of the periodical table (i.e., Cl represents chlorine, Se represents selenium, etc.).

As utilized herein, the term "alkyl", either alone or within other terms such as "haloalkyl" and "alkylthio", means an acyclic alkyl radical containing from 1 to about 10, preferably from 3 to about 8 carbon atoms and more preferably 3 to about 6 carbon atoms. Said alkyl radicals may be optionally substituted with groups as defined below. Examples of such radicals include methyl, ethyl, chloroethyl, hydroxyethyl, n-propyl, oxopropyl, isopropyl, n-butyl, cyanobutyl, isobutyl, sec-butyl, tert-butyl, pentyl, aminopentyl, iso-amyl, hexyl, octyl and the like.

The term "alkenyl" refers to an unsaturated, acyclic hydrocarbon radical in so much as it contains at least one double bond. Such alkenyl radicals contain from about 2 to about 10 carbon atoms, preferably from about 3 to about 8 carbon atoms and more preferably 3 to about 6 carbon atoms. Said alkenyl radicals may be optionally substituted with groups as defined below. Examples of suitable alkenyl radicals include propenyl, 2-chloropropenyl, buten-1-yl, isobutenyl, penten-1-yl, 2-2-methylbuten-1-yl, 3-methylbuten-1-yl, hexen-1-yl, 3-hydroxyhexen-1-yl, hepten-1-yl, and octen-1-yl, and the like.

The term "alkynyl" refers to an unsaturated, acyclic hydrocarbon radical in so much as it contains one or more triple bonds, such radicals containing about 2 to about 10 carbon atoms, preferably having from about 3 to about 8 carbon atoms and more preferably having 3 to about 6 carbon atoms. Said alkynyl radicals may be optionally substituted with groups as defined below. Examples of suitable alkynyl radicals include ethynyl, propynyl, hydroxypropynyl, butyn-1-yl, butyn-2-yl, pentyn-1-yl, pentyn-2-yl, 4-methoxypentyn-2-yl, 3-methylbutyn-1-yl, hexyn-1-yl, hexyn-2-yl, hexyn-3-yl, 3,3-dimethylbutyn-1-yl radicals and the like.

The term "hydrido" denotes a single hydrogen atom (H). This hydrido radical may be attached, for example, to an oxygen atom to form a "hydroxyl" radical, one hydrido radical may be attached to a carbon atom to form a "methine" radical -CH=, or two hydrido radicals may be attached to a carbon atom to form a "methylene" (-CH<sub>2</sub>-) radical.

The term "carbon" radical denotes a carbon atom without any covalent bonds and capable of forming four covalent bonds.

The term "cyano" radical denotes a carbon radical having three of four covalent bonds shared by a nitrogen atom.

The term "hydroxyalkyl" embraces radicals wherein any one or more of the alkyl carbon atoms is substituted with a hydroxyl as defined above. Specifically embraced are monohydroxyalkyl, dihydroxyalkyl and polyhydroxyalkyl radicals.

- 5       The term "alkanoyl" embraces radicals wherein one or more of the terminal alkyl carbon atoms are substituted with one or more carbonyl radicals as defined below. Specifically embraced are monocarbonylalkyl and dicarbonylalkyl radicals. Examples of monocarbonylalkyl radicals include formyl, acetyl, and pentanoyl. Examples of dicarbonylalkyl radicals include  
10      oxalyl, malonyl, and succinyl.

The term "alkylene" radical denotes linear or branched radicals having from 1 to about 10 carbon atoms and having attachment points for two or more covalent bonds. Examples of such radicals are methylene, ethylene, methylethylene, and isopropylidene.

- 15       The term "alkenylene" radical denotes linear or branched radicals having from 2 to about 10 carbon atoms, at least one double bond, and having attachment points for two or more covalent bonds. Examples of such radicals are 1,1-vinylidene ( $\text{CH}_2=\text{C}$ ), 1,2-vinylidene ( $-\text{CH}=\text{CH}-$ ), and 1,4-butadienyl ( $-\text{CH}=\text{CH}-\text{CH}=\text{CH}-$ ).

- 20       The term "halo" means halogens such as fluorine, chlorine, bromine or iodine atoms.

- The term "haloalkyl" embraces radicals wherein any one or more of the alkyl carbon atoms is substituted with halo as defined above. Specifically embraced are monohaloalkyl, dihaloalkyl and polyhaloalkyl radicals. A  
25      monohaloalkyl radical, for one example, may have either a bromo, chloro or a fluoro atom within the radical. Dihalo radicals may have two or more of the same halo atoms or a combination of different halo radicals and polyhaloalkyl radicals may have more than two of the same halo atoms or a combination of different halo radicals. More preferred haloalkyl radicals are "haloalkyl"  
30      radicals having one to about six carbon atoms. Examples of such haloalkyl radicals include fluoromethyl, difluoromethyl, trifluoromethyl, chloromethyl, dichloromethyl, trichloromethyl, trifluoroethyl, pentafluoroethyl, heptafluoropropyl, difluorochloromethyl, dichlorofluoromethyl, difluoroethyl, difluoropropyl, dichloroethyl and dichloropropyl.

The terms "alkenyloxy" and "alkenyloxyalkyl" embrace linear or branched oxy-containing radicals each having alkenyl portions of two to about ten carbon atoms, such as ethenyloxy or propenyloxy radical. The term "alkenyloxyalkyl" also embraces alkenyl radicals having one or more alkenyloxy radicals attached to the alkyl radical, that is, to form monoalkenyloxyalkyl and dialkenyloxyalkyl radicals. More preferred alkenyloxy radicals are "alkenyloxy" radicals having two to six carbon atoms. Examples of such radicals include ethenyloxy, propenyloxy, butenyloxy, and isopropenyloxy alkyls. The "alkenyloxy" radicals may be further substituted with one or more halo atoms, such as fluoro, chloro or bromo, to provide "haloalkenyloxy" radicals. Examples of such radicals include trifluoroethenyloxy, fluoroethenyloxy, difluoroethenyloxy, and fluoropropenyloxy.

The term "haloalkoxyalkyl" also embraces alkyl radicals having one or more haloalkoxy radicals attached to the alkyl radical, that is, to form monohaloalkoxyalkyl and dihaloalkoxyalkyl radicals. The term "haloalkenyloxy" also embraces oxygen radicals having one or more haloalkenyloxy radicals attached to the oxygen radical, that is, to form monohaloalkenyloxy and dihaloalkenyloxy radicals. The term "haloalkenyloxyalkyl" also embraces alkyl radicals having one or more haloalkenyloxy radicals attached to the alkyl radical, that is, to form monohaloalkenyloxyalkyl and dihaloalkenyloxyalkyl radicals.

The term "alkylenedioxy" radicals denotes alkylene radicals having at least two oxygens bonded to a single alkylene group. Examples of "alkylenedioxy" radicals include methylenedioxy, ethylenedioxy, alkylsubstituted methylenedioxy, and arylsubstituted methylenedioxy. The term "haloalkylenedioxy" radicals denotes haloalkylene radicals having at least two oxy groups bonded to a single haloalkyl group. Examples of "haloalkylenedioxy" radicals include difluoromethylenedioxy, tetrafluoroethylenedioxy, tetrachloroethylenedioxy, alkylsubstituted monofluoromethylenedioxy, and arylsubstituted monofluoromethylenedioxy.

The term "aryl", alone or in combination, means a carbocyclic aromatic system containing one, two or three rings wherein such rings may be attached together in a pendant manner or may be fused. The term "fused" means that a second ring is present (ie, attached or formed) by having two adjacent atoms in

unsaturated condensed heterocyclic group containing 1 to 5 nitrogen atoms, for example, indolyl, isoindolyl, indolizynyl, benzimidazolyl, quinolyl, isoquinolyl, indazolyl, benzotriazolyl, tetrazolopyridazinyl [e.g., tetrazolo [1,5-b]pyridazinyl, etc.], etc.; unsaturated 3 to 6-membered heteromonocyclic group containing an oxygen atom, for example, pyranyl, 2-furyl, 3-furyl, etc.; unsaturated 5 to 6-membered heteromonocyclic group containing a sulfur atom, for example, 2-thienyl, 3-thienyl, etc.; unsaturated 5- to 6-membered heteromonocyclic group containing 1 to 2 oxygen atoms and 1 to 3 nitrogen atoms, for example, oxazolyl, isoxazolyl, oxadiazolyl [e.g., 1,2,4-oxadiazolyl, 1,3,4-oxadiazolyl, 1,2,5-oxadiazolyl, etc.] etc.; unsaturated condensed heterocyclic group containing 1 to 2 oxygen atoms and 1 to 3 nitrogen atoms [e.g. benzoxazolyl, benzoxadiazolyl, etc.]; unsaturated 5 to 6-membered heteromonocyclic group containing 1 to 2 sulfur atoms and 1 to 3 nitrogen atoms, for example, thiazolyl, thiadiazolyl [e.g., 1,2,4- thiadiazolyl, 1,3,4-thiadiazolyl, 1,2,5-thiadiazolyl, etc.] etc.; unsaturated condensed heterocyclic group containing 1 to 2 sulfur atoms and 1 to 3 nitrogen atoms [e.g., benzothiazolyl, benzothiadiazolyl, etc.] and the like. The term also embraces radicals where heterocyclic radicals are fused with aryl radicals. Examples of such fused bicyclic radicals include benzofuran, benzothiophene, and the like. Said "heteroaryl" group may be substituted as defined herein. Preferred heteroaryl radicals include five and six membered unfused radicals. Non-limiting examples of heteroaryl radicals include 2-thienyl, 3-thienyl, 2-furyl, 3-furyl, 2-pyrrolyl, 3-pyrrolyl, 2-imidazolyl, 4-imidazolyl, 3-pyrazolyl, 4-pyrazolyl, 1,2,4-triazol-3-yl, 1,2,4-triazol-5-yl, 1,2,4-oxadiazol-3-yl, 1,2,4-oxadiazol-5-yl, 1,3,4-oxadiazol-3-yl, 1,3,4-oxadiazol-5-yl, 3-isothiazolyl, 5-isothiazolyl, 2-oxazolyl, 2-thiazolyl, 3-isoxazolyl, 5-isoxazolyl, 2-pyridyl, 3-pyridyl, 4-pyridyl, 2-pyrazinyl, 2-pyrimidinyl, 4-pyrimidinyl, 5-pyrimidinyl, 3-pyridazinyl, 4-pyridazinyl, 1,3,5-triazin-2-yl, 1,2,4-triazin-3-yl, 1,2,4-triazin-5-yl, 1,2,4-triazin-6-yl, 1,2,3-triazin-4-yl, and 1,2,3-triazin-5-yl, and the like.

30       The term "sulfonyl", whether used alone or linked to other terms such as alkylsulfonyl, denotes respectively divalent radicals  $\text{-SO}_2\text{-}$ . "Alkylsulfonyl", embraces alkyl radicals attached to a sulfonyl radical, where alkyl is defined as above. "Alkylsulfonylalkyl", embraces alkylsulfonyl radicals attached to an alkyl radical, where alkyl is defined as above. "Haloalkylsulfonyl", embraces  
35       haloalkyl radicals attached to a sulfonyl radical, where haloalkyl is defined as

The term "cycloalkyl" embraces radicals having three to 15 carbon atoms. More preferred cycloalkyl radicals are "cycloalkyl" radicals having three to seven carbon atoms. Examples include radicals such as cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl and cycloheptyl. The term cycloalkyl  
 5 embraces radicals having seven to 15 carbon atoms and having two to four rings. Examples include radicals such as norbornyl (i.e., bicyclo[2.2.1]heptyl) and adamantyl. The term "cycloalkylalkyl" embraces cycloalkyl-substituted alkyl radicals. Preferable cycloalkylalkyl radicals are "cycloalkylalkyl" radicals having cycloalkyl radicals attached to alkyl radicals having one to six  
 10 carbon atoms. Examples of such radicals include cyclohexylhexyl. The term "cycloalkenyl" embraces radicals having three to ten carbon atoms and one or more carbon-carbon double bonds. Preferred cycloalkenyl radicals are "cycloalkenyl" radicals having three to seven carbon atoms. Examples include radicals such as cyclobutenyl, cyclopentenyl, cyclohexenyl and cycloheptenyl.  
 15 The term "halocycloalkyl" embraces radicals wherein any one or more of the cycloalkyl carbon atoms is substituted with halo as defined above. Specifically embraced are monohalocycloalkyl, dihalocycloalkyl and polyhalocycloalkyl radicals. A monohalocycloalkyl radical, for one example, may have either a bromo, chloro or a fluoro atom within the radical. Dihalo radicals may have two  
 20 or more of the same halo atoms or a combination of different halo radicals and polyhalocycloalkyl radicals may have more than two of the same halo atoms or a combination of different halo radicals. More preferred halocycloalkyl radicals are "halocycloalkyl" radicals having three to about eight carbon atoms. Examples of such halocycloalkyl radicals include fluorocyclopropyl, difluorocyclobutyl, trifluorocyclopentyl, tetrafluorocyclohexyl, and  
 25 dichlorocyclopropyl. The term "halocycloalkenyl" embraces radicals wherein any one or more of the cycloalkenyl carbon atoms is substituted with halo as defined above. Specifically embraced are monohalocycloalkenyl, dihalocycloalkenyl and polyhalocycloalkenyl radicals.  
 30 The term "cycloalkoxy" embraces cycloalkyl radicals attached to an oxy radical. Examples of such radicals includes cyclohexoxy and cyclopentoxy. The term "cycloalkoxyalkyl" also embraces alkyl radicals having one or more cycloalkoxy radicals attached to the alkyl radical, that is, to form monocycloalkoxyalkyl and dicycloalkoxyalkyl radicals. Examples of such  
 35 radicals include cyclohexoxyethyl. The "cycloalkoxy" radicals may be further

radical, where heteroaryl is defined as above. "Heteroarylsulfonylalkyl", embraces heteroarylsulfonyl radicals attached to an alkyl radical, where alkyl is defined as above.

The term "aryloxy" embraces aryl radicals, as defined above, attached to an oxygen atom. Examples of such radicals include phenoxy, 4-chloro-3-ethylphenoxy, 4-chloro-3-methylphenoxy, 3-chloro-4-ethylphenoxy, 3,4-dichlorophenoxy, 4-methylphenoxy, 3-trifluoromethoxyphenoxy, 3-trifluoromethylphenoxy, 4-fluorophenoxy, 3,4-dimethylphenoxy, 5-bromo-2-fluorophenoxy, 4-bromo-3-fluorophenoxy, 4-fluoro-3-methylphenoxy, 5,6,7,8-tetrahydronaphthyl, 3-isopropylphenoxy, 3-cyclopropylphenoxy, 3-ethylphenoxy, 3-pentafluoroethylphenoxy, 3-(1,1,2,2-tetrafluoroethoxy)-phenoxy, and 4-*tert*-butylphenoxy.

The term "aroyl" embraces aryl radicals, as defined above, attached to a carbonyl radical as defined above. Examples of such radicals include benzoyl and toluoyl.

The term "aralkanoyl" embraces aralkyl radicals, as defined herein, attached to a carbonyl radical as defined above. Examples of such radicals include, for example, phenylacetyl.

The term "aralkoxy" embraces oxy-containing aralkyl radicals attached through an oxygen atom to other radicals. More preferred aralkoxy radicals are "aralkoxy" radicals having phenyl radicals attached to an alkoxy radical as described above. Examples of such radicals include benzyloxy, 1-phenylethoxy, 3-trifluoromethoxybenzyloxy, 3-trifluoromethylbenzyloxy, 3,5-difluorobenzyloxy, 3-bromobenzyloxy, 4-propylbenzyloxy, 2-fluoro-3-trifluoromethylbenzyloxy, and 2-phenylethoxy.

The term "aryloxyalkyl" embraces aryloxy radicals, as defined above, attached to an alkyl group. Examples of such radicals include phenoxymethyl.

The term "haloaryloxyalkyl" embraces aryloxyalkyl radicals, as defined above, wherein one to five halo radicals are attached to an aryloxy group.

The term "heteroaroyl" embraces heteroaryl radicals, as defined above, attached to a carbonyl radical as defined above. Examples of such radicals include furoyl and nicotiny.

The term "heteroaralkanoyl" embraces heteroaralkyl radicals, as defined herein, attached to a carbonyl radical as defined above. Examples of such radicals include, for example, pyridylacetyl and furylbutyryl.

The term "heteroaralkoxy" embraces oxy-containing heteroaralkyl radicals attached through an oxygen atom to other radicals. More preferred heteroaralkoxy radicals are "heteroaralkoxy" radicals having heteroaryl radicals attached to alkoxy radical as described above. The term

- 5 "heterocyclalkoxy" embraces oxy-containing heterocyclalkyl radicals attached through an oxygen atom to other radicals.

The term, "haloheteroaryloxyalkyl" embraces heteroaryloxyalkyl radicals, as defined above, wherein one to four halo radicals are attached to an heteroaryloxy group.

- 10 The term "heteroaryl amino" embraces heteroaryl radicals, as defined above, attached to an amino group. Examples of such radicals include pyridyl amino. The term "heterocycl amino" embraces heterocycl radicals, as defined above, attached to an amino group.

- 15 The term "heteroaralkyl amino" embraces heteroaralkyl radicals, as defined above, attached to an amino group. Examples of such radicals include pyridyl methyl amino. The term "heterocycl alkyl amino" embraces heterocycl alkyl radicals, as defined above, attached to an amino group.

- 20 The term "heteroaryloxy" embraces heteroaryl radicals, as defined above, attached to an oxy group. Examples of such radicals include 2-thiophenyloxy, 2-pyrimidyloxy, 2-pyridyloxy, 3-pyridyloxy, and 4-pyridyloxy. The term "heterocycl oxy" embraces heterocycl radicals, as defined above, attached to an oxy group.

- 25 The term "heteroaryloxyalkyl" embraces heteroaryloxy radicals, as defined above, attached to an alkyl group. Examples of such radicals include 2-pyridyloxymethyl, 3-pyridyloxyethyl, and 4-pyridyloxymethyl. The term "heterocycl oxyalkyl" embraces heterocycl oxy radicals, as defined above, attached to an alkyl group.

The term "arylthio" embraces aryl radicals, as defined above, attached to a sulfur atom. Examples of such radicals include phenylthio.

- 30 The term "arylthioalkyl" embraces arylthio radicals, as defined above, attached to an alkyl group. Examples of such radicals include phenylthiomethyl.

- 35 The term "alkylthioalkyl" embraces alkylthio radicals, as defined above, attached to an alkyl group. Examples of such radicals include methylthiomethyl. The term "alkoxyalkyl" embraces alkoxy radicals, as defined

- dialkylsulfonium, trialkylphosphonium, dialkylsulfoniumalkyl, perhaloaralkyl, aralkylsulfonyl, aralkylsulfonylalkyl, aralkylsulfinyl, aralkylsulfinylalkyl, halocycloalkyl, halocycloalkenyl, cycloalkylsulfinyl, cycloalkylsulfinylalkyl, cycloalkylsulfonyl, cycloalkylsulfonylalkyl, heteroaryl amino, N-heteroaryl amino-N-alkyl amino, heteroaralkyl amino, heteroaryl oxy, heteroaryl oxyalkyl, haloalkylthio, alkanoyloxy, alkoxy, alkoxyalkyl, haloalkoxyalkyl, heteroaralkoxy, cycloalkoxy, cycloalkenyloxy, cycloalkoxyalkyl, cycloalkylalkoxy, cycloalkenyloxyalkyl, cycloalkylenedioxy, halocycloalkoxy, halocycloalkoxyalkyl, halocycloalkenyloxy, halocycloalkenyloxyalkyl, hydroxy, amino, thio, nitro, alkyl amino, alkylthio, alkylthioalkyl, aryl amino, aralkyl amino, arylthio, arylthioalkyl, heteroaralkoxyalkyl, alkylsulfinyl, alkylsulfinylalkyl, arylsulfinylalkyl, arylsulfonylalkyl, heteroaryl sulfinylalkyl, heteroaryl sulfonylalkyl, alkylsulfonyl, alkylsulfonylalkyl, haloalkylsulfinylalkyl, haloalkylsulfonylalkyl, alkylsulfonamido, alkylaminosulfonyl, amidosulfonyl, monoalkyl amidosulfonyl, dialkyl amidosulfonyl, monoaryl amidosulfonyl, arylsulfonamido, diarylamidosulfonyl, monoalkyl monoaryl amidosulfonyl, arylsulfinyl, arylsulfonyl, heteroarylthio, heteroaryl sulfinyl, heteroaryl sulfonyl, alkanoyl, alkenoyl, aroyl, heteroaroyl, aralkanoyl, heteroaralkanoyl, haloalkanoyl, alkyl, alkenyl, alkynyl, alkenyloxy, alkenyloxyalkyl, alkylenedioxy, haloalkylenedioxy, cycloalkyl, cycloalkylalkanoyl, cycloalkenyl, cycloalkylalkyl, cycloalkenylalkyl, halo, haloalkyl, haloalkenyl, haloalkoxy, hydroxyhaloalkyl, hydroxyaralkyl, hydroxyalkyl, aminoalkyl, hydroxyheteroaralkyl, haloalkoxyalkyl, aryl, aralkyl, aryloxy, aralkoxy, aryloxyalkyl, saturated heterocyclyl, partially saturated heterocyclyl, heteroaryl, heteroaryl oxy, heteroaryl oxyalkyl, arylalkyl, heteroaralkyl, arylalkenyl, heteroarylalkenyl, carboxyalkyl, carboalkoxy, alkoxycarbonyl, carboaralkoxy, carboxamido, carboxamidoalkyl, cyano, carbohaloalkoxy, phosphono, phosphonoalkyl, diaralkoxyphosphono, and diaralkoxyphosphonoalkyl.

The term “spacer” can include a covalent bond and a linear moiety having a backbone of 1 to 7 contiguous atoms. The spacer may have 1 to 7 atoms of a univalent or multi-valent chain. Univalent chains may be constituted by a radical selected from  $=C(H)-$ ,  $=C(R^{2a})-$ ,  $-O-$ ,  $-S-$ ,  $-S(O)-$ ,  $-S(O)_2-$ ,  $-NH-$ ,  $-N(R^{2a})-$ ,  $-N=$ ,  $-CH(OH)-$ ,  $=C(OH)-$ ,  $-CH(OR^{2a})-$ ,  $=C(OR^{2a})-$ , and



- C(O)- wherein  $R^{2a}$  is selected from alkyl, alkenyl, alkynyl, aryl, heteroaryl, aralkyl, aryloxyalkyl, alkoxyalkyl, alkylthioalkyl, arylthioalkyl, cycloalkyl, cycloalkylalkyl, haloalkyl, haloalkenyl, haloalkoxyalkyl, perhaloaralkyl, heteroarylalkyl, heteroaryloxyalkyl, heteroarylthioalkyl, and heteroarylalkenyl.
- 5 Multi-valent chains may consist of a straight chain of 1 or 2 or 3 or 4 or 5 or 6 or 7 atoms or a straight chain of 1 or 2 or 3 or 4 or 5 or 6 atoms with a side chain. The chain may be constituted of one or more radicals selected from: alkylene, alkenyl, -O-, -O-CH<sub>2</sub>-, -S-CH<sub>2</sub>-, -CH<sub>2</sub>CH<sub>2</sub>-, ethenyl, -CH=CH(OH)-, -OCH<sub>2</sub>O-, -O(CH<sub>2</sub>)<sub>2</sub>O-, -NHCH<sub>2</sub>-, -OCH(R<sup>2a</sup>)O-,
- 10 -O(CH<sub>2</sub>CHR<sup>2a</sup>)O-, -OCF<sub>2</sub>O-, -O(CF<sub>2</sub>)<sub>2</sub>O-, -S-, -S(O)-, -S(O)<sub>2</sub>-, -N(H)-, -N(H)O-, -N(R<sup>2a</sup>)O-, -N(R<sup>2a</sup>)-, -C(O)-, -C(O)NH-, -C(O)NR<sup>2a</sup>-, -N=, -OCH<sub>2</sub>-, -SCH<sub>2</sub>-, S(O)CH<sub>2</sub>-, -CH<sub>2</sub>C(O)-, -CH(OH)-, =C(OH)-, -CH(OR<sup>2a</sup>)-, =C(OR<sup>2a</sup>)-, S(O)<sub>2</sub>CH<sub>2</sub>-, and -NR<sup>2a</sup>CH<sub>2</sub>- and many other radicals defined above or generally known or ascertained by one of skill-in-the art. Side chains may
- 15 include substituents such as 1 or more non-hydrido substituents such as amidino, guanidino, dialkylsulfonium, trialkylphosphonium, dialkylsulfoniumalkyl, perhaloaralkyl, aralkylsulfonyl, aralkylsulfonylalkyl, aralkylsulfinyl, aralkylsulfinylalkyl, halocycloalkyl, halocycloalkenyl, cycloalkylsulfinyl, cycloalkylsulfinylalkyl, cycloalkylsulfonyl, cycloalkylsulfonylalkyl,
- 20 heteroarylamino, N-heteroarylamino-N-alkylamino, heteroaralkylamino, heteroaryloxy, heteroaryloxyalkyl, haloalkylthio, alkanoyloxy, alkoxy, alkoxyalkyl, haloalkoxyalkyl, heteroaralkoxy, cycloalkoxy, cycloalkenyloxy, cycloalkoxyalkyl, cycloalkylalkoxy, cycloalkenyloxyalkyl, cycloalkylenedioxy, halocycloalkoxy, halocycloalkoxyalkyl, halocycloalkenyloxy, halocycloalkenyloxyalkyl, hydroxy,
- 25 amino, thio, nitro, alkylamino, alkylthio, alkylthioalkyl, arylamino, aralkylamino, arylthio, arylthioalkyl, heteroaralkoxyalkyl, alkylsulfinyl, alkylsulfinylalkyl, arylsulfinylalkyl, arylsulfonylalkyl, heteroarylsulfinylalkyl, heteroarylsulfonylalkyl, alkylsulfonyl, alkylsulfonylalkyl, haloalkylsulfinylalkyl, haloalkylsulfonylalkyl, alkylsulfonamido, alkylaminosulfonyl, amidosulfonyl, monoalkyl amidosulfonyl,
- 30 dialkyl amidosulfonyl, monoarylamidosulfonyl, arylsulfonamido, diarylamidosulfonyl, monoalkyl monoaryl amidosulfonyl, arylsulfinyl, arylsulfonyl,

aliphatic, cycloaliphatic, aromatic, araliphatic, heterocyclic, carboxylic and sulfonic classes of organic acids, examples of which are formic, acetic, propionic, succinic, glycolic, gluconic, lactic, malic, tartaric, citric, ascorbic, glucuronic, maleic, fumaric, pyruvic, aspartic, glutamic, benzoic, anthranilic, mesylic, salicylic, p-hydroxybenzoic, phenylacetic, mandelic, embonic (pamoic), methanesulfonic, ethylsulfonic, benzenesulfonic, sulfanilic, stearic, cyclohexylaminosulfonic, algenic, galacturonic acid. Suitable pharmaceutically-acceptable base addition salts of compounds of Formula (I) include metallic salts made from aluminum, calcium, lithium, magnesium, potassium, sodium and zinc or organic salts made from N,N'-dibenzylethylenediamine, choline, chloroprocaine, diethanolamine, ethylenediamine, meglumine (N-methylglucamine) and procain. All of these salts may be prepared by conventional means from the corresponding compound of Formula (I) by reacting, for example, the appropriate acid or base with the compound of Formula (I).

The present invention also comprises a pharmaceutical composition comprising a therapeutically-effective amount of a compound of Formulas (I) in association with at least one pharmaceutically-acceptable carrier, adjuvant or diluent. Pharmaceutical compositions of the present invention can comprise the active compounds of Formula (I) in association with one or more non-toxic, pharmaceutically-acceptable carriers and/or diluents and/or adjuvants (collectively referred to herein as "carrier" materials) and, if desired, other active ingredients. The active compounds of the present invention may be administered by any suitable route, preferably in the form of a pharmaceutical composition adapted to such a route, and in a dose effective for the treatment intended.

The active compounds and composition may, for example, be administered orally, intravascularly, intraperitoneally, subcutaneously, intramuscularly, ocularly, or topically. For treating ocular build up of fibrin, the compounds may be administered intraocularly or topically as well as orally or parenterally.

The compounds can be administered in the form of a depot injection or implant preparation which may be formulated in such a manner as to permit a sustained release of the active ingredient. The active ingredient can be compressed into pellets or small cylinders and implanted subcutaneously or

intramuscularly as depot injections or implants. Implants may employ inert materials such as biodegradable polymers or synthetic silicones, for example, Silastic, silicone rubber or other silicon containing polymers.

The compounds can also be administered in the form of liposome  
5 delivery systems, such as small unilamellar vesicles, large unilamellar vesicles and multilamellar vesicles. Liposomes can be formed from a variety of phospholipids, such as cholesterol, stearylamine or phosphatidylcholines.

The compounds may also be delivered by the use of monoclonal  
antibodies as individual carriers to which the compound molecules are coupled.  
10 The compounds may also be coupled with soluble polymers as targetable drug carriers. Such polymers can include polyvinylpyrrolidone, pyran copolymer, polyhydroxy-propyl-methacrylamide-phenol, polyhydroxyethyl-aspartamide-phenol, or polyethyleneoxide-polylysine substituted with palmitoyl residues. Furthermore, the compounds may be coupled to a class of biodegradable  
15 polymers useful in achieving controlled release of a drug, for example, polylactic acid, polyglycolic acid, copolymers of polylactic and polyglycolic acid, polyepsilon caprolactone, polyhydroxy butyric acid, polyorthoesters, polyacetals, polydihydropyrans, polycyanoacrylates and cross linked or amphitpathic block copolymers of hydrogels.

20 For oral administration, the pharmaceutical composition may be in the form of, for example, tablets, capsules (each of which includes sustained release or timed release formulations), pills, powders, granules, elixers, tinctures, suspensions, liquids including syrups, and emulsions. The pharmaceutical composition is preferably made in the form of a dosage unit containing a  
25 particular amount of the active ingredient. Examples of such dosage units are tablets or capsules. The active ingredient may also be administered by injection as a composition wherein, for example, saline, dextrose or water may be used as a suitable carrier.

The amount of therapeutically active compounds which are administered  
30 and the dosage regimen for treating a disease condition with the compounds and/or compositions of this invention depends on a variety of factors, including the age, weight, sex and medical condition of the subject, the severity of the disease, the route and frequency of administration, and the particular compound employed, and thus may vary widely.

The pharmaceutical compositions may contain active ingredients in the range of about 0.1 to 2000 mg, and preferably in the range of about 0.5 to 500 mg. A daily dose of about 0.01 to 100 mg/kg body weight, and preferably between about 0.5 and about 20 mg/kg body weight, may be appropriate. The daily dose can be administered in one to four doses per day.

The compounds may be formulated in topical ointment or cream, or as a suppository, containing the active ingredients in a total amount of, for example, 0.075 to 30% w/w, preferably 0.2 to 20% w/w and most preferably 0.4 to 15% w/w. When formulated in an ointment, the active ingredients may be employed with either paraffinic or a water-miscible ointment base.

Alternatively, the active ingredients may be formulated in a cream with an oil-in-water cream base. If desired, the aqueous phase of the cream base may include, for example at least 30% w/w of a polyhydric alcohol such as propylene glycol, butane-1,3-diol, mannitol, sorbitol, glycerol, polyethylene glycol and mixtures thereof. The topical formulation may desirably include a compound which enhances absorption or penetration of the active ingredient through the skin or other affected areas. Examples of such dermal penetration enhancers include dimethylsulfoxide and related analogs. The compounds of this invention can also be administered by a transdermal device. Preferably topical administration will be accomplished using a patch either of the reservoir and porous membrane type or of a solid matrix variety. In either case, the active agent is delivered continuously from the reservoir or microcapsules through a membrane into the active agent permeable adhesive, which is in contact with the skin or mucosa of the recipient. If the active agent is absorbed through the skin, a controlled and predetermined flow of the active agent is administered to the recipient. In the case of microcapsules, the encapsulating agent may also function as the membrane.

The oily phase of the emulsions of this invention may be constituted from known ingredients in a known manner. While the phase may comprise merely an emulsifier, it may comprise a mixture of at least one emulsifier with a fat or an oil or with both a fat and an oil. Preferably, a hydrophilic emulsifier is included together with a lipophilic emulsifier which acts as a stabilizer. It is also preferred to include both an oil and a fat. Together, the emulsifier(s) with or without stabilizer(s) make-up the so-called emulsifying wax, and the wax together with the oil and fat make up the so-called emulsifying ointment base

which forms the oily dispersed phase of the cream formulations. Emulsifiers and emulsion stabilizers suitable for use in the formulation of the present invention include Tween 60, Span 80, cetostearyl alcohol, myristyl alcohol, glyceryl monostearate, and sodium lauryl sulfate, among others.

5           The choice of suitable oils or fats for the formulation is based on achieving the desired cosmetic properties, since the solubility of the active compound in ~~most~~ oils likely to be used in pharmaceutical emulsion formulations is very low. Thus, the cream should preferably be a non-greasy, non-staining and washable product with suitable consistency to avoid leakage  
10 from tubes or other containers. Straight or branched chain, mono- or dibasic alkyl esters such as diisoadipate, isocetyl stearate, propylene glycol diester of coconut fatty acids, isopropyl myristate, decyl oleate, isopropyl palmitate, butyl stearate, 2-ethylhexyl palmitate or a blend of branched chain esters may be used. These may be used alone or in combination depending on the properties  
15 required. Alternatively, high melting point lipids such as white soft paraffin and/or liquid paraffin or other mineral oils can be used.

For therapeutic purposes, the active compounds of the present invention are ordinarily combined with one or more adjuvants appropriate to the indicated route of administration. If administered *per os*, the compounds may be  
20 admixed with lactose, sucrose, starch powder, cellulose esters of alkanolic acids, cellulose alkyl esters, talc, stearic acid, magnesium stearate, magnesium oxide, sodium and calcium salts of phosphoric and sulfuric acids, gelatin, acacia gum, sodium alginate, polyvinylpyrrolidone, and/or polyvinyl alcohol, and then tableted or encapsulated for convenient administration. Such capsules or tablets  
25 may contain a controlled-release formulation as may be provided in a dispersion of active compound in hydroxypropylmethyl cellulose. Formulations for parenteral administration may be in the form of aqueous or non-aqueous isotonic sterile injection solutions or suspensions. These solutions and suspensions may be prepared from sterile powders or granules  
30 having one or more of the carriers or diluents mentioned for use in the formulations for oral administration. The compounds may be dissolved in water, polyethylene glycol, propylene glycol, ethanol, corn oil, cottonseed oil, peanut oil, sesame oil, benzyl alcohol, sodium chloride, and/or various buffers. Other adjuvants and modes of administration are well and widely known in the  
35 pharmaceutical art.

In practicing the methods of the present invention for the treatment and prevention of a variety of thrombotic conditions including coronary artery and cerebrovascular disease, the compounds and pharmaceutical compositions of the present invention are administered alone or in combination with one another, or in combination with other therapeutics or in vivo diagnostic agents. The coagulation cascade inhibitors of the present invention can also be co-administered with suitable anti-platelet aggregation agents, including, but not limited to ticlopidine or clopidogrel, fibrinogen receptor antagonists (e.g. to treat or prevent unstable angina or to prevent reocclusion after angioplasty and restenosis), anti-coagulants such as aspirin, warfarin or heparins, thrombolytic agents such as plasminogen activators or streptokinase to achieve synergistic effects in the treatment of various pathologies, lipid lowering agents including antihypercholesterolemics (e.g. HMG CoA reductase inhibitors such as mevastatin, lovastatin, simvastatin, pravastatin, and fluvastatin, HMG CoA synthetase inhibitors, etc.), anti-diabetic drugs, or other cardiovascular agents (loop diuretics, thiazide type diuretics, nitrates, aldosterone antagonists (i.e., spironolactone and epoxymexlerenone), angiotensin converting enzyme (e.g. ACE) inhibitors, angiotensin II receptor antagonists, beta-blockers, antiarrhythmics, anti-hypertension agents, and calcium channel blockers) to treat or prevent atherosclerosis. For example, patients suffering from coronary artery disease, and patients subjected to angioplasty procedures, would benefit from coadministration of fibrinogen receptor antagonists and coagulation cascade inhibitors of the present invention. Also, coagulation cascade inhibitors could enhance the efficiency of tissue plasminogen activator-mediated thrombolytic reperfusion.

Typical doses of coagulation cascade inhibitors of the present invention with other suitable anti-platelet agents, anticoagulation agents, cardiovascular therapeutic agents, or thrombolytic agents may be the same as those doses of coagulation cascade inhibitors administered without coadministration of additional anti-platelet agents, anticoagulation agents, cardiovascular therapeutic agents, or thrombolytic agents, or may be substantially less than those doses of coagulation cascade inhibitors administered without coadministration of additional anti-platelet agents, anticoagulation agents, cardiovascular therapeutic agents, or thrombolytic agents, depending on a patient's therapeutic needs.

The present novel methods preferably employ compounds which selectively inhibit human TF-VIIA over the inhibition of both human Thrombin II and human factor Xa. Preferably, the compounds have a human TF-VIIA  $IC_{50}$  of less than 0.5  $\mu M$  and also have a selectivity ratio of TF-VIIA inhibition over both human Thrombin II and human factor Xa inhibition of at least 10, and more preferably at least 100. Even more preferably, the compounds have a human TF-VIIA  $IC_{50}$  of less than 0.1  $\mu M$  and also have a selectivity ratio of TF-VIIA inhibition over both human Thrombin II and human factor Xa inhibition of at least 1000, and most preferably at least 10,000.

10 All mentioned references are incorporated by reference as if here written.

Although this invention has been described with respect to specific embodiments, the details of these embodiments are not to be construed as limitations. The following examples are provided to illustrate the present invention and are not intended to limit the scope thereof. Without further elaboration, it is believed that one skilled in the art can, using the preceding descriptions, utilize the present invention to its fullest extent. Therefore the following preferred specific embodiments are to be construed as merely illustrative and not limitative of the remainder of the disclosure in any way whatsoever. Compounds containing multiple variations of the structural modifications illustrated in the schemes or the following Examples are also contemplated. Those skilled in the art will readily understand that known variations of the conditions and processes of the following preparative procedures can be used to prepare these compounds.

25 One skilled in the art may use these generic methods to prepare the following specific examples, which have been or may be properly characterized by  $^1H$  NMR, mass spectrometry, elemental composition, and similar procedures. These compounds also may be formed in vivo. The following examples contain detailed descriptions of the methods of preparation of compounds of Formula (I). These detailed descriptions fall within the scope and are presented for illustrative purposes only and are not intended as a restriction on the scope of the invention. All parts are by weight and temperatures are Degrees centigrade unless otherwise indicated.

35 The following general synthetic sequences are useful in making the present invention. Abbreviations used in the schemes and tables include: "AA"

- represents amino acids, "AcCN" represents acetonitrile, "AcOH" represents acetic acid, "BINAP" represents 2,2'-bis(diphenylphosphino)-1,1'-binaphthyl, "BnOH" represents benzyl alcohol, "BnCHO" represents 2-phenylethanal, "BnSO<sub>2</sub>Cl" represents benzylsulfonyl chloride, "Boc" represents tert-butylloxycarbonyl, "BOP" represents benzotriazol-1-yl-oxy-tris-(dimethylamino), "bu" represents butyl, "dba" represents dibenzylideneacetone, "DCC" represents 1,3-dicyclohexylcarbodiimide, "DCM" represents dichloromethane or methylene chloride, "DIBAH" or "DIBAL" represents diisobutylaluminum hydride, "DMF" represents dimethylformamide,
- 5 butylloxycarbonyl, "DMSO" represents dimethylsulfoxide, "DPPA" represents diphenylphosphoryl azide, "EDC" represents 1-[3-(dimethylamino)propyl]-3-ethylcarbodiimide hydrochloride, "Ex. No." represents Example Number, "Fmoc" represents 9-fluorenylmethoxycarbonyl, "HOBt" represents hydroxybenzotriazole, "LDA" represents lithium diisopropylamide, "MW"
- 10 represents molecular weight, "NMM" represents N-methylmorpholine, "Ph" represents phenyl or aryl, "PHTH" represents a phthaloyl group, "pnZ" represents 4-nitrobenzyloxy-carbonyl, "PTC" represents a phase transfer catalyst, "py" represents pyridine, "RNH<sub>2</sub>" represents a primary organic amine, "SEM" represents 2-(trimethylsilyl)ethoxy-methyl chloride, "p-
- 15 TsOH" represents paratoluenesulfonic acid, "TBAF" represents tetrabutylammonium fluoride, "TBTU" represents 2-(1H-benzotriazole-1-yl)-1,1,3,3-tetramethyl uronium tetrafluoroborate, "TEA" represents triethylamine, "TFA" represents trifluoroacetic acid, "THF" represents tetrahydrofuran, "TMS" represents trimethylsilyl, "TMSCN" represents trimethylsilyl
- 20 cyanide, and "Cbz" or "Z" represents benzyloxycarbonyl.
- 25

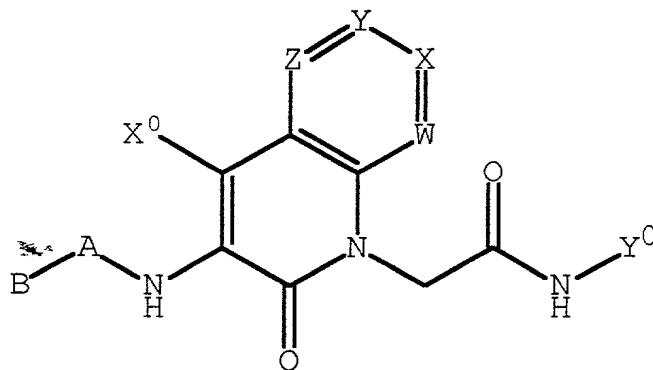
### **GENERAL SYNTHETIC PROCEDURES AND SPECIFIC EXAMPLES**

- The pyridone compounds of the present invention can be synthesized, for
- 30 example, according to the following procedures and Schemes given below.

A pyridone having a fused aryl or heteroaryl group can be considered to be a quinolone. A generic quinolinone analogous structure to the basic pyridone ring



type is shown in Figure 1. W, X, Y and Z are optionally selected, for example, from

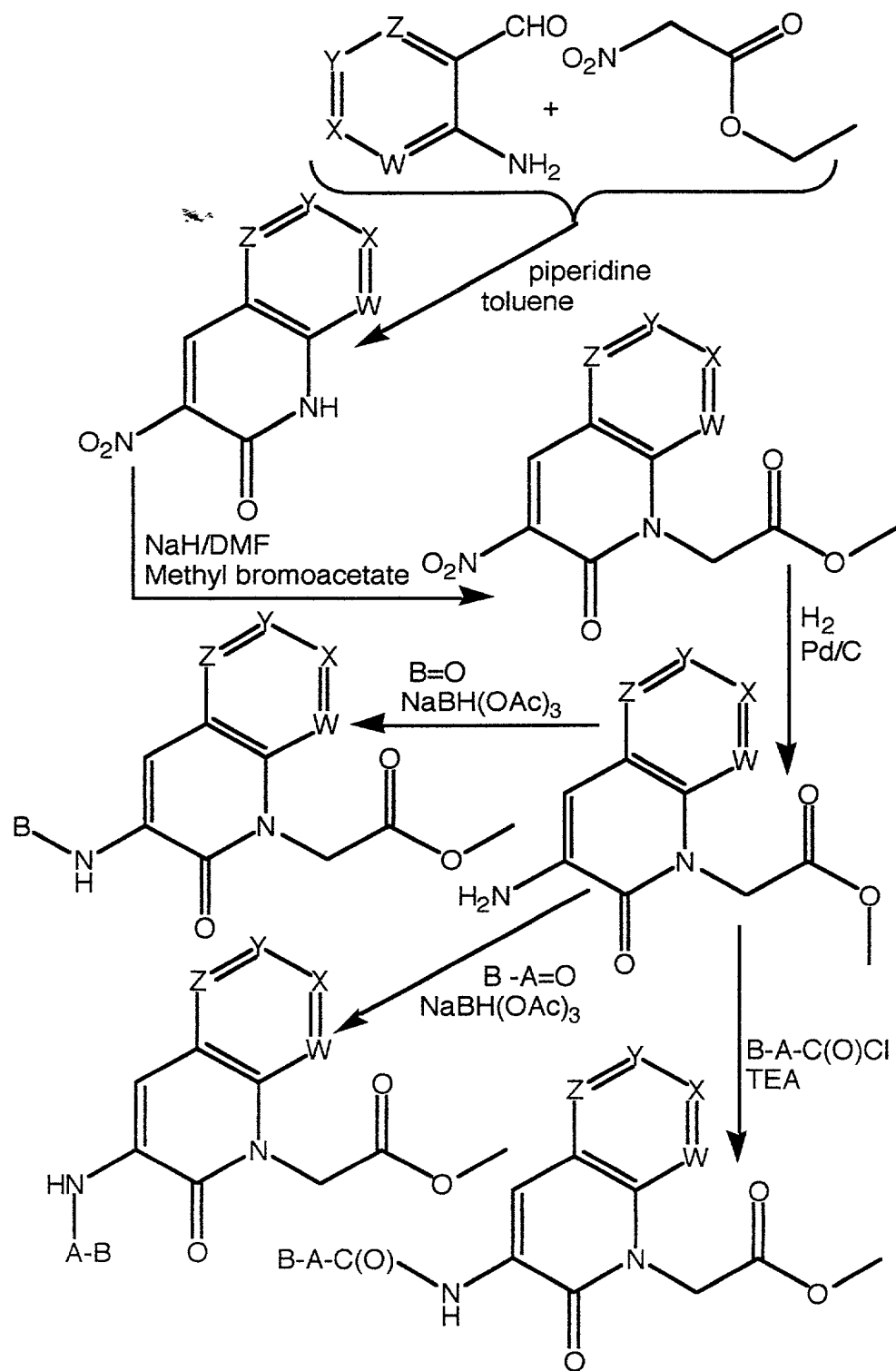


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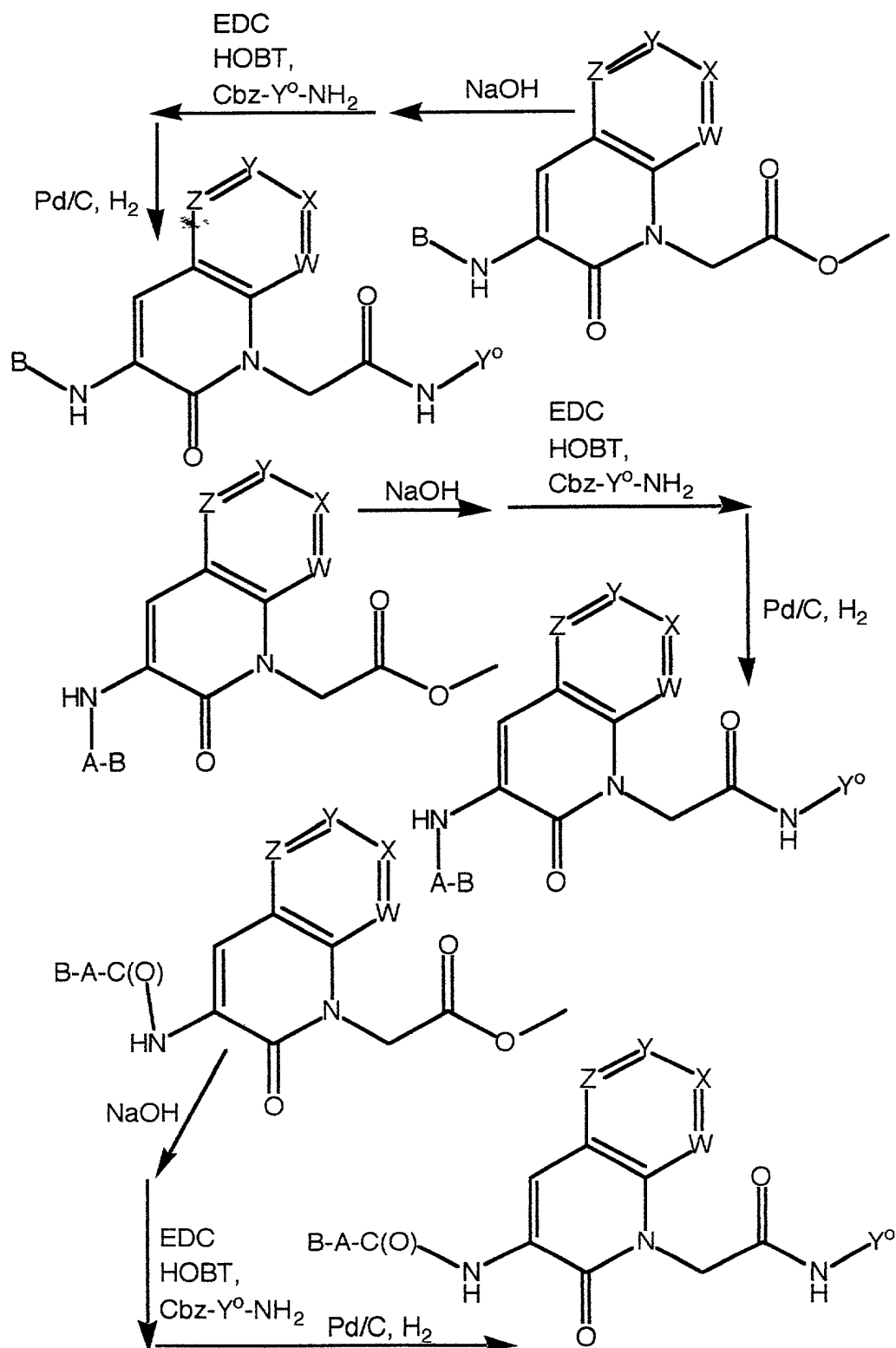
**Figure 1. Quinolinone Analogues of Pyridones**

- 5 N, CF, CCl, C-CN, C-CH<sub>3</sub>, C-CH<sub>2</sub>CH<sub>3</sub>, C-NH<sub>2</sub>, C-CH<sub>2</sub>NH<sub>2</sub>, C-CH<sub>2</sub>NHCH<sub>3</sub>, C-NHCH<sub>3</sub>, C-N(CH<sub>3</sub>)<sub>2</sub>, C-CH(NH<sub>2</sub>)CH<sub>3</sub>, C-CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>, C-NHOCH<sub>3</sub>, C-NHOCH<sub>2</sub>CH<sub>3</sub>, C-C(NH)NH<sub>2</sub>, C-C(NOHNH<sub>2</sub>), C-OH, C-CH<sub>2</sub>OH, C-CH<sub>2</sub>CH<sub>2</sub>OH, C-CH(OH)CH<sub>3</sub>, C-OCH<sub>3</sub>, C-OCH<sub>2</sub>CH<sub>3</sub>, C-CO<sub>2</sub>H, C-CO<sub>2</sub>CH<sub>3</sub>, C-C(O)NH<sub>2</sub>, C-CH(NH<sub>2</sub>)CH<sub>3</sub>, C-CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>, C-NHOCH<sub>3</sub>, C-C(NH)NH<sub>2</sub>, C-C(NOHNH<sub>2</sub>), C-OH, C-CH<sub>2</sub>OH, C-CH<sub>2</sub>CH<sub>2</sub>OH, C-CH(OH)CH<sub>3</sub>, C-OCH<sub>3</sub>, C-CO<sub>2</sub>H, C-C(O)NH<sub>2</sub>, C-C(O)NHCH<sub>3</sub>, C-CH<sub>2</sub>CO<sub>2</sub>H, N-benzylamidocarbonyl-C, N-(2-chlorobenzyl)amidocarbonyl-C, N-(3-fluorobenzyl)amidocarbonyl-C, N-benzylamidosulfonyl-C, N-(2-trifluoromethylbenzyl)amidocarbonyl-C, , N-ethylamidocarbonyl-C, N-(1-phenylethyl)amidocarbonyl-C, N-propylamidocarbonyl-C, N-(1-methyl-1-phenylethyl)amidocarbonyl-C, N-(2-chlorobenzyl)amidosulfonyl-C, N-isopropylamidocarbonyl-C, N-isobutylamidocarbonyl-C, N-(2-butyl)amidocarbonyl-C, N-cyclobutylamidocarbonyl-C, N-cyclopentylamidocarbonyl-C, N-cyclohexylamidocarbonyl-C. Quinolones in which W of W-X=Y-Z is attached to the four and five positions of the pyridone instead of the five and six positions can be prepared by comparable procedures. A general procedure for the preparation a wide variety of quinolone type 2-pyridones is summarized in **Scheme 1** and **Scheme 2**. These procedures can accommodate the introduction of a wide range of substituents into the fused ring either as such, precursors groups for

## Scheme 1: General Quinolone Synthesis-I

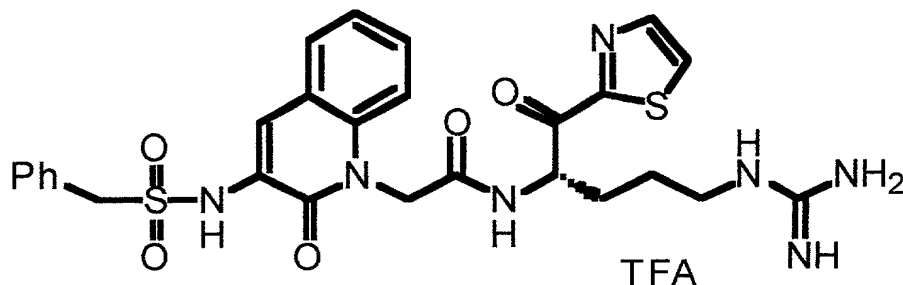


## Scheme 2: General Quinolone Synthesis-1 (Concluded)



desired groups (for example, a nitro for subsequent conversion to an amino, an acetoxymethyl for subsequent hydrolysis to a hydroxymethyl or oxidation to an aldehyde or carboxylic acid, and the like) or using protected groups. The preparation of specific quinolinone analogues of a pyridone of this invention are exemplified as in **Example 1** through **Example 16**.

### Example 1



**EX-1A)** 3-Nitro-1*H*-Quinolin-2-One (2.35 g, 12.37 mmole) in 50 ml anhydrous DMF was mixed with NaH 60% in mineral oil (0.59 g, 14.87 g), and the mixture was stirred for five minutes. To this mixture, 2-methyl-2-bromoacetate (2.27g, 14.84 mmole) was added dropwise. After stirring the reaction mixture for 2 hours at 20 °C, DMF was removed *via* vacuum rotary evaporation to lead to a yellow oil residue. The residue was triturated in water to yield a yellow solid that was washed with water and hexane. The yellow solid was re-crystallized in ethylacetate to yield a yellow needle crystal solid (1.38 g) as the expected product, methyl-(3-nitro-2-oxo-2*H*-quinolin-1-yl)acetate. More product (1.20 g) was obtained from the mother liquor via silica gel flash chromatography to separate it from the O-alkylated side product (0.334 g). The desired product (**EX-1A**) yield was 80%. HPLC-MS (0 to 95% AcCN / 6 min @ 1.0 mL / Min @ 254 nm @ 50 °C): retention time 2.48 min,  $M+H^+$  = 263.2 for formula  $C_{12}H_{10}N_2O_5$ .  $^1H$  NMR (400 MHz,  $CDCl_3$ ):  $\delta$  3.80 (s, 3H), 5.17 (s, 2H), 7.19 (d,  $J$  = 8.4 Hz, 1H), 7.40 (t,  $J$  = 7.6 Hz, 1H), 7.76 (t,  $J$  = 7.6 Hz, 1H), 7.78 (d,  $J$  = 8.4 Hz, 1H), 8.61 (s, 1H).  $^{13}C$  NMR (101 MHz,  $CDCl_3$ ):  $\delta$  44.2, 52.9, 114.2, 117.1, 124.0, 131.7, 134.8, 137.9, 140.6, 154.0, 167.6.

**EX-1B)** Compound **EX-1A** (2.51 g, 9.58 mmole) was mixed with 10% Pd on activated carbon (0.51 g, 0.48 mmole) in 150 ml methanol. The mixture was

stirred under  $H_2$  that was introduced through a rubber balloon for 2 hours. The reaction mixture was filtered, and the methanol was removed to yield a white crystalline solid (2.06 g,  $y = 93\%$ ) as methyl-(3-amino-2-oxo-2*H*-quinolin-1-yl)acetate (**3**). HPLC-MS (0 to 95% AcCN / 6 min @ 1.0 mL / Min @ 254 nm @

5 50 °C): retention time 2.12 min,  $M+H^+ = 233.1$  for formula  $C_{12}H_{12}N_2O_3$ .

Compound **3** (2.04 g, 8.79 mmole) and pyridine (3.55 ml, 43.95 mmole) were dissolved in 200 ml acetonitrile. This mixture was cooled down to -10 °C with a water-acetone-dry ice mixture bath. To this mixture, *a*-toluenesulfonyl chloride (4.19 g, 21.98 mmole) dissolved in 10 ml acetonitrile was added dropwise quickly. The

10 reaction mixture was stirred for 2.5 hours from -10 °C to 0 °C. During the reaction, the product as a white solid precipitated from the solution. The pure product,

methyl-(3-benzylsulfonylamido-2-oxo-2*H*-quinolin-1-yl)acetate (**EX-1B**) (2.92 g) was obtained by filtration and washing it with acetonitrile. More product (0.34 g)

15 was obtained by working up the filtrate and subjecting it to a Biotage-40 silica gel column chromatography using 25% ethylacetate in hexane as the elute. HPLC-MS (0 to 95% AcCN / 6 min @ 1.0 mL / Min @ 254 nm @ 50 °C): retention time 3.52 min,  $M+Na^+ = 408.9$  for formula  $C_{19}H_{18}N_2O_5SNa$ .  $^1H$  NMR (400 MHz,

$CDCl_3$ ):  $\delta$  3.81 (s, 3H), 4.42 (s, 2H), 5.14 (s, 2H), 7.09 (d,  $J = 8.8$  Hz, 1H), 7.27 (m, 5H), 7.48 (t,  $J = 7.6$  Hz, 2H), 7.61 (d,  $J = 10$  Hz, 1H), 8.61 (s, 1H).  $^{13}C$  NMR

20 (101 MHz,  $CDCl_3$ ):  $\delta$  44.5, 52.8, 58.5, 113.3, 119.5, 120.4, 123.5, 127.2, 127.8, 128.7, 128.8, 129.0, 129.2, 130.8, 135.2, 157.3, 167.9.

**EX-1C**) Compound **EX-1B** (3.19 g, 8.26 mmole) was dissolved in 50 ml THF, 30 ml MeOH and 50 ml 1 M LiOH. The mixture was stirred at 20 °C for one hour. The mixture was concentrated to remove the organic solvents. The remaining

25 aqueous solution was acidified to pH = 1 with 1M HCl, and a solid precipitated from the solution. The solid was purified by filtration, washing with 1M HCl and water, and drying *via* vacuum to give a white solid as the pure product (3-

benzylsulfonylamino-2-oxo-2*H*-quinolin-1-yl)acetic acid (**EX-1C**) (2.98 g, yield of 97%). HPLC-MS (0 to 95% AcCN / 6 min @ 1.0 mL / Min @ 254 nm @ 50

30 °C): retention time 3.09 min,  $M+Na^+ = 395.2$  for formula  $C_{18}H_{16}N_2O_5SNa$ .  $^1H$  NMR (400 MHz,  $CDCl_3$ ):  $\delta$  4.54 (s, 2H), 5.13 (s, 2H), 7.15 (t,  $J = 87.2$  Hz, 1H), 7.23 (m, 3H), 7.33 (m, 3H), 7.50 (t,  $J = 7.6$  Hz, 2H), 7.59 (s, 1H).

**EX-1D)** Compound **EX-1C** (0.209 g, 0.56 mmol), EDC (0.140 g, 0.73 mmol) and HOBt (0.112 g, 0.73 mmol) were mixed in 1.5 ml DMF, and the mixture was stirred at 20 °C for 10 minutes. To this mixture was added the premixed solution of (4S)-(9Cl)-N-[[[4-amino-5-hydroxy-5-(2-thiazolyl)pentyl]amino]iminomethyl]-4-methoxy-2,3,6-trimethylbenzenesulfonamide HCl salt (0.387 g, 0.73 mmol), diisopropylethylamine (0.65 ml, 3.93 mmol) in 1.5 ml DMF. The combined reaction mixture was stirred for 45 minutes at 20 °C. The reaction mixture was partitioned between ethylacetate and saturated ammonium chloride aqueous solution. The organic phase was washed with saturated aqueous potassium carbonate and ammonium chloride solution, dried over Na<sub>2</sub>SO<sub>4</sub>. After removing the ethylacetate, the residue was subjected to a Biotage silica gel column chromatography to yield a white solid as the product N-[2(S)-1(R,S)-2-[1-hydroxy-1-(2-thiazolyl)]-5-[[4-methoxy-2,3,6-trimethyl)sulfonylamino]iminomethyl]aminopentyl]-[3-benzylsulfonylamino-2-oxo-2H-quinolin-1-yl]acetamide (**EX-1D**) (0.347 g, y = 76%). HPLC-MS (0 to 95% AcCN / 6 min @ 1.0 mL / Min @ 254 nm @ 50 °C): retention time 3.75 min, M+H<sup>+</sup> = 810.3 for formula C<sub>37</sub>H<sub>43</sub>N<sub>7</sub>O<sub>8</sub>S<sub>3</sub>. Since the compound is a mixture of two diastereomers, the <sup>1</sup>H NMR and <sup>13</sup>C NMR was complex.

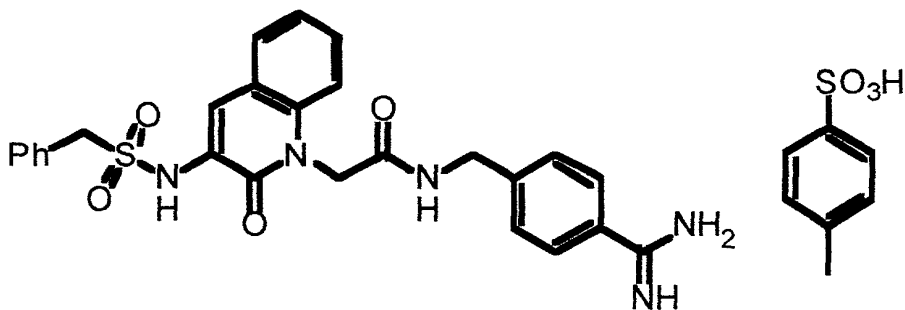
**EX-1E)** Compound **EX-1D** (0.32 g, 0.395 mmol) was mixed with 1,3-dihydro-1-hydroxy-3,3-bis(trifluoromethyl)-1-oxide-1,2-benziodoxole (0.238 g, 0.593 mmole) in 5 ml acetonitrile. The mixture was stirred at 20 °C for 2 hours. It was then mixed with 30 ml 1M NaHSO<sub>3</sub> aqueous solution. The combined solution was extracted with ethylacetate, and the organic phase was washed with saturated NaHCO<sub>3</sub> aqueous solution and dried over Na<sub>2</sub>SO<sub>4</sub>. After removing the ethylacetate, the remaining residue was subjected to a silica gel flash column chromatography using 30% ethylacetate in hexane as elute to yield a white solid as the product N-[[2(S)- 2-[1-Oxo-1-(2-thiazolyl)]-5-[[[4-methoxy-2,3,6-trimethyl)sulfonylamino]iminomethyl]amino]pentyl]-[3-benzylsulfonylamino-2-oxo-2H-quinolin-1-yl]acetamide (**EX-1E**) (0.296 g, 93%). HPLC-MS (0 to 95% AcCN / 6 min @ 1.0 mL / Min @ 254 nm @ 50 °C): retention time 4.07 min, M+H<sup>+</sup> = 808.2 for formula C<sub>37</sub>H<sub>41</sub>N<sub>7</sub>O<sub>8</sub>S<sub>3</sub>. <sup>1</sup>H NMR (400 MHz, acetone-d<sub>6</sub>): δ 1.71 (b, 4H), 2.07 (s, 3H), 2.59 (s, 3H), 2.64 (s, 3H), 3.24 (m, 2H), 3.80 (s, 3H), 4.62 (s, 2H), 5.17 (d, J = -16.4 Hz, 1H), 5.22(d, J = 16.4Hz, 1H), 5.62 (m, 1H), 6.47 (b, 2H), 6.64(s, 1H), 7.24 (m, 4H), 7.36 (m, 3H), 7.44 (m, 2H), 7.59 (t, J = 7.2

Hz, 2H), 7.95 (b, 1H), 8.08 (m, 3H).  $^{13}\text{C}$  NMR (101 MHz,  $\text{CDCl}_3$ ):  $\delta$  12.0, 15.6, 18.6, 24.2, 41.1, 46.6, 55.8, 55.9, 58.5, 66.1, 112.3, 120.3, 121.2, 123.8, 124.8, 128.5, 129.1, 129.2, 129.3, 129.6, 129.7, 129.9, 123.0, 131.9, 135.8, 136.7, 137.0, 139.0, 146.1, 157.4, 158.0, 158.8, 165.6, 167.7, 192.0.

5 Compound **EX-1E** (0.240 g, 0.296 mmol) was treated with thioanisole (0.220 g, 1.78 mmol) and 8 ml trifluoroacetic acid for 5 hours. After removing the TFA, the residue was triturated in diethylether twice and ethylacetate once to give a white amorphous solid as the product N-[[2(S)- 2-[1-Oxo-1-(2-thiazolyl)]-5-  
10 1-yl)acetamide trifluoroacetic acid salt (0.183 g, yield of 87%). HPLC-MS (0 to 95% AcCN / 6 min @ 1.0 mL / Min @ 254 nm @ 50 °C): retention time 3.07 min,  $\text{M}+\text{H}^+ = 596.2$  for formula  $\text{C}_{27}\text{H}_{29}\text{N}_7\text{O}_5\text{S}_2$ .  $^1\text{H}$  NMR (400 MHz,  $\text{DMSO}-d_6$ ):  $\delta$  1.58 (bm, 2H), 1.67 (bm, 1H), 1.90 (b, 1H), 3.10 (bm, 2H), 4.60 (s, 2H), 3.80 (s, 3H), 4.62 (s, 2H), 5.01 (d,  $J = -17.2$  Hz, 1H), 5.11 (d,  $J = -17.2$  Hz, 1H), 5.38 (m, 1H), 6.80-7.70 (m, 15H), 8.14(s, 1H), 8.23 (s, 1H), 8.88 (b, 1H), 9.99 (d,  $J = 8.0$   
15 Hz, 1H).  $^{13}\text{C}$  NMR (101 MHz,  $\text{DMSO}-d_6$ ):  $\delta$  25.3, 28.0, 44.9, 48.6, 54.4, 58.0, 114.2, 119.7, 121.9, 124.8, 126.1, 128.2, 128.3, 128.7, 131.0, 135.9, 137.1, 138.7, 144.7, 145.4, 156.6, 157.4, 164.4, 166.8, 191.4.

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### Example 2

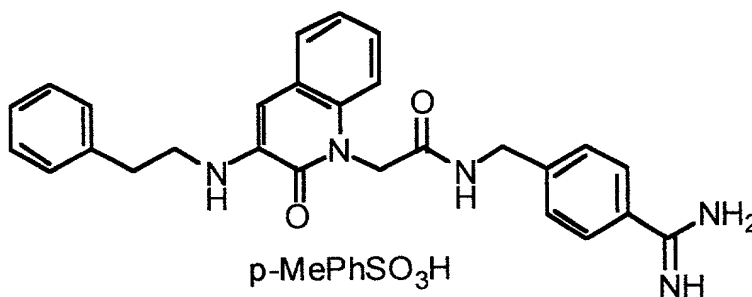


**EX-2A)** 3-Benzylsulfonylamino-2-oxo-2H-quinolin-1-yl)acetic acid was coupled with benzyl-[[4-aminomethylphenyl]iminomethyl] amino]carbamate hydrogen chloride salt using EDC, HOBT as coupling agents in the presence of  
25 DIEA in DMF. Work up procedure gave a white amorphous solid as the product, N-[[4-[(benzylcarbonyl-amino)iminomethyl]phenyl]methyl]-(3-benzylsulfonylamino-2-oxo-2H-quinolin-1-yl)acetamide. HPLC-MS (0 to 95% AcCN / 6 min @ 1.0 mL / Min @ 254 nm @ 50 °C): retention time 3.38 min,

$M+H^+ = 638.3$  for formula  $C_{34}H_{31}N_5O_6S$ .  $^1H$  NMR (400 MHz,  $CDCl_3$ ):  $\delta$  4.38 (s, 2H), 4.50 (d,  $J = 6.0$  Hz, 2H), 4.92 (s, 2H), 5.14 (s, 2H), 7.06 (t,  $J = 7.2$  Hz, 1H), 7.13 (t,  $J = 7.6$  Hz, 2H), 7.15-7.24 (m, 6H), 7.30-7.40 (m, 6H), 7.45 (m, 3H), 7.52 (m, 1H), 7.57 (d,  $J = 8.4$  Hz, 2H), 8.65(b, 1H), 9.09 (b, 1H).

- 5 Compound **EX-2A** (0.118 g, 0.185 mmol), *p*-toluenesulfonic acid mono hydrate (0.035 g, 0.185 mmol) and 10% Pd on activated carbon (0.029 g, 0.018 mmol) were mixed with 5 ml methanol. The mixture was stirred for 2 hours under an atmosphere of hydrogen that was introduced through a rubber balloon. After filtering off the catalyst and removing the methanol, the remaining residue was
- 10 recrystallized in a solvent of 2:1 ether to methanol to yield a white amorphous solid as the product, N-[[4-[(amino)iminomethyl]phenyl]methyl]-(3-benzylsulfonyl-amino-2-oxo-2*H*-quinolin-1-yl)acetamide *p*-toluenesulfonic acid salt, (0.080 g, yield = 64%). HPLC-MS (0 to 95% AcCN / 6 min @ 1.0 mL / Min @ 254 nm @ 50 °C): retention time 2.81 min,  $M+H^+ = 504.5$  for formula  $C_{26}H_{25}N_5O_4S$ .  $^1H$
- 15 NMR (400 MHz,  $CD_3OD$ ):  $\delta$  2.36 (s, 3H), 4.52 (s, 2H), 4.57 (s, 2H), 5.15 (s, 2H), 7.18-7.32 (m, 7H), 7.36 (t,  $J = 7.2$  Hz, 2H), 7.48-7.55 (m, 4H), 7.59 (s, 1H), 7.70 (d,  $J = 8.0$  Hz, 2H), 7.74 (d,  $J = 8.4$  Hz, 2H).

### Example 3



- 20 **EX-3A**) Methyl 2-[3-amino-2-oxo-2*H*-quinolin-1-yl]acetate, (9.1 g, 39.2 mmol) was mixed with Boc anhydride (9.41 g, 43.1 mmol), triethylamine (6 ml, 43.1 mmol) and DMAP (50 mg, 0.4 mmol) in 200 ml DCM. The reaction mixture was stirred at 20 °C for 14 hours. The reaction solution was washed with 1M citric acid solution twice, saturated sodium bicarbonate solution three times, saturated ammonium chloride once and it was dried over anhydrous  $MgSO_4$ . After filtration and removing the solvent, the residue was treated with methanol. A white solid was precipitated. Filtration and washing with methanol, the pure product, **EX-3A**, was
- 25



obtained as a white powder (9.90 g, 87%). HPLC-MS (0 to 95% AcCN / 6 min @ 1.0 mL / Min @ 254 nm @ 50 °C): retention time 2.85 min,  $M+H^+$  = 291.1 for formula  $C_{14}H_{15}N_2O_5$ .  $^1H$  NMR (400 MHz, Methanol- $d_4$ ):  $\delta$  3.76 (s, 3H), 3.82 (s, 3H), 5.15 (s, 2H), 7.09 (d,  $J$  = 8.4 Hz, 1H), 7.26 (t,  $J$  = 7.6 Hz, 1H), 7.43 (t,  $J$  = 7.6 Hz, 2H), 7.61 (d,  $J$  = 7.6 Hz, 1H), 7.96 (s, 1H), 8.39 (s, 1H).  $^{13}C$  NMR (101 MHz, Methanol- $d_4$ ):  $\delta$  (ppm) 44.4, 52.5, 52.6, 113.1, 118.9, 121.0, 123.3, 127.4, 128.4, 128.5, 134.5, 153.9, 157.6, 168.1.

**EX-3B)** Compound **EX-3A** (1.09 g, 3.75 mmol) was mixed with KOH (5.2 g, 92.8 mmol) in 30 ml water and 30 ml methanol. After refluxing for three hours, the reaction solution was concentrated to 10 ml and acidified with concentrated HCl to pH = 2. After cooling down to 0 °C, the product was filtered out, washed with water and dried via vacuum. A yellow powder acid was obtained as the pure product (0.733 g,  $y$  = 90%). HPLC-MS (0 to 95% AcCN / 6 min @ 1.0 mL / Min @ 254 nm @ 50 °C): retention time 1.60 min,  $M+H^+$  = 219.1 for formula  $C_{11}H_{11}N_2O_3$ .

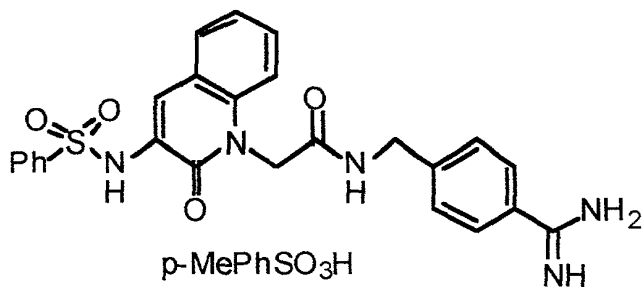
**EX-3C)** Compound **EX-3B** (0.296 g, 1.16 mmol) was treated with phenylacetaldehyde (0.21 g, 1.74 mmol) in 15 ml methanol for 10 minutes. To this mixture was added sodium cyanoborohydride (0.08 g, 1.28 mmol). After two hours, the reaction was completed. Methanol was removed under reduced pressure and the residue was mixed with water. The product 2-[3-(2-phenylethylamino)-2-oxo-2H-quinolin-1-yl]acetic acid (**EX-3C**) was obtained after filtration and washed with water as a white powder (0.225 g, 60%). HPLC-MS (0 to 95% AcCN / 6 min @ 1.0 mL / Min @ 254 nm @ 50 °C): retention time 3.55 min,  $M+H^+$  = 323.2 for formula  $C_{19}H_{19}N_2O_3$ .  $^1H$  NMR (400 MHz, Methanol- $d_4$ ):  $\delta$  2.97 (t,  $J$  = 7.2 Hz, 2H), 3.45 (t,  $J$  = 7.2 Hz, 2H), 5.02 (s, 2H), 6.65 (s, 1H), 7.13-7.29 (m, 8H), 7.46 (d,  $J$  = 8.0 Hz, 1H).  $^{13}C$  NMR (101 MHz, Methanol- $d_4$ ):  $\delta$  (ppm) 35.9, 45.5, 46.6, 105.7, 115.1, 123.9, 124.5, 125.9, 127.0, 127.4, 129.6, 129.8, 133.9, 137.8, 140.8, 159.9, 173.1.

**EX-3D)** Compound **EX-3D** was synthesized in same way as described for compound **EX-2A**. It is a white powder. HPLC-MS (0 to 95% AcCN / 6 min @ 1.0 mL / Min @ 254 nm @ 50 °C): retention time 3.65 min,  $M+H^+$  = 588.6 for formula  $C_{35}H_{34}N_5O_4$ .  $^1H$  NMR (400 MHz, Methanol- $d_4$ ):  $\delta$  2.95 (t,  $J$  = 7.2 Hz, 2H), 3.43 (t,  $J$  = 7.2 Hz, 2H), 4.46 (s, 2H), 5.09 (s, 2H), 5.37 (s, 2H), 6.64 (s, 1H),

7.13-7.29 (m, 9H), 7.38-7.41 (m, 3H), 7.47 (m, 4H), 7.70 (d,  $J = 8.4$  Hz, 2H).  $^{13}\text{C}$  NMR (101 MHz, Methanol- $d_4$ ): d (ppm) 35.8, 43.7, 45.4, 46.9, 70.6, 105.8, 114.9, 124.2, 124.6, 126.0, 127.2, 127.4, 129.1, 129.6, 129.7, 129.8, 129.9, 130.0, 133.8, 137.8, 140.7, 160.2, 170.3.

- 5           The product of **Example 3** was synthesized in same way as described for compound of **Example 2** as a *p*-toluenesulfonic acid salt and an amorphous solid. HPLC-MS (0 to 95% AcCN / 6 min @ 1.0 mL / Min @ 254 nm @ 50 °C): retention time 3.18 min,  $M+H^+ = 454.1$  for formula  $\text{C}_{27}\text{H}_{28}\text{N}_5\text{O}_2$ .  $^1\text{H}$  NMR (400 MHz, Methanol- $d_4$ ): d 2.32 (s, 3H), 3.03 (t,  $J = 7.2$  Hz, 2H), 3.56 (t,  $J = 7.2$  Hz, 2H), 4.48 (s, 2H), 5.14 (s, 2H), 7.19 (d,  $J = 8.0$  Hz, 4H), 7.26-7.34 (m, 6H), 7.48 (d,  $J = 8.0$  Hz, 2H), 7.55 (s, 1H), 7.64 (d,  $J = 7.6$  Hz, 1H), 7.69 (t,  $J = 8$  Hz, 4H), 8.72 (s, 2H), 9.18 (s, 2H).  $^{13}\text{C}$  NMR (101 MHz, Methanol- $d_4$ ): d (ppm) 21.3, 34.3, 43.7, 46.8, 59.6, 115.4, 122.0, 124.6, 126.9, 127.8, 128.2, 128.3, 129.0, 129.2, 129.5, 129.7, 129.8, 129.9, 130.3, 131.4, 137.4, 138.9, 141.8, 146.7, 159.5, 168.2, 168.3, 169.7.

#### Example 4



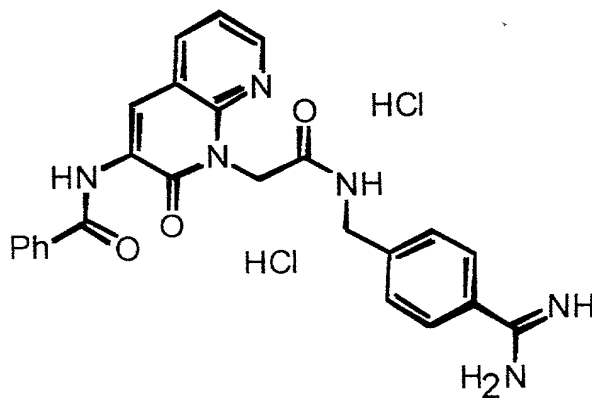
- EX-4A**) 2-[3-Amino-2-oxo-2H-quinolin-1-yl]acetic acid, (0.206 g, 0.81 mmol) was treated with benzenesulfonyl chloride (0.172 g, 0.97 mmol) in pyridine for one hour. After removing the pyridine, the residue was recrystallized in acetone to yield a white crystal solid as the product, 2-[3-benzenesulfonylamino-2-oxo-2H-quinolin-1-yl]acetic acid, (**EX-4A**)(0.117 g,  $y = 41\%$ ). HPLC-MS (0 to 95% AcCN / 6 min @ 1.0 mL / Min @ 254 nm @ 50 °C): retention time 2.85 min,  $M+H^+ = 359.2$  for formula  $\text{C}_{17}\text{H}_{15}\text{N}_2\text{O}_2\text{S}$ .  $^1\text{H}$  NMR (400 MHz, Acetone- $d_6$ ): d 5.12 (s, 2H), 7.28 (t,  $J = 7.2$  Hz, 1H), 7.36 (d,  $J = 8.8$  Hz, 1H), 7.48-7.63 (m, 4H), 7.75 (dd,  $J = 8, 1.6$  Hz, 1H), 7.74 (s, 1H), 8.00-8.03 (m, 2H).  $^{13}\text{C}$  NMR (101

MHz, Acetone- $d_6$ ):  $\delta$  (ppm) 44.8, 115.0, 120.8, 120.9, 123.9, 127.8, 128.1, 129.4, 129.9, 130.1, 134.2, 136.7, 140.4, 158.2, 169.1.

**EX-4B)** Compound **EX-4A** was synthesized in same way as described for compound **EX-2A** giving a white powder. HPLC-MS (0 to 95% AcCN / 6 min @ 1.0 mL / Min @ 254 nm @ 50 °C): retention time 3.23 min,  $M+H^+ = 624.2$  for formula  $C_{33}H_{30}N_5O_6S$ .  $^1H$  NMR (400 MHz, Methanol- $d_4$ ):  $\delta$  4.45 (s, 2H), 5.06 (s, 2H), 5.38 (s, 2H), 7.24-7.60 (m, 14H), 7.71 (d,  $J = 8.0$  Hz, 2H), 7.84 (s, 1H), 7.94 (d,  $J = 7.2$  Hz, 2H).  $^{13}C$  NMR (101 MHz, Methanol- $d_4$ ):  $\delta$  (ppm) 43.7, 47.0, 70.7, 115.3, 121.7, 122.5, 124.5, 127.3, 128.4, 129.1, 129.6, 129.7, 129.9, 130.0, 130.1, 130.2, 130.3, 134.4, 135.8, 137.2, 140.8, 147.7, 154.6, 159.3, 167.9, 169.8.

Compound of this example was synthesized in same way as described for compound **Example 2**. It is an amorphous off-white solid and a *p*-toluenesulfonic acid salt. HPLC-MS (5 to 95% AcCN / 6 min @ 1.0 mL / Min @ 254 nm @ 50 °C): retention time 2.02 min,  $M+H^+ = 490.1$  for formula  $C_{25}H_{24}N_5O_4S$ .  $^1H$  NMR (400 MHz, Methanol- $d_4$ ):  $\delta$  2.34 (s, 3H), 4.46 (s, 2H), 5.06 (s, 2H), 7.20 (d,  $J = 8.0$  Hz, 1H), 7.24-7.29 (m, 2H), 7.46-7.51 (m, 6H), 7.55 (d,  $J = 7.2$  Hz, 1H), 7.62 (d,  $J = 8.0$  Hz, 1H), 7.71 (m, 4H), 7.86 (s, 1H), 7.95 (d,  $J = 8.0$  Hz, 2H).  $^{13}C$  NMR (101 MHz, Methanol- $d_4$ ):  $\delta$  (ppm) 21.3, 43.6, 46.9, 115.1, 121.6, 122.4, 124.4, 126.8, 127.9, 128.2, 128.9, 129.0, 129.5, 129.7, 130.1, 130.2, 134.3, 137.0, 140.6, 146.6, 159.2, 169.5, 184.2.

### Example 5



**EX-5A)** A solution of 2-amino pyridine (20.42 g, 217.0 mmol) in dichloromethane 500 mL was cooled to 0 °C and treated with triethyl amine (36.29

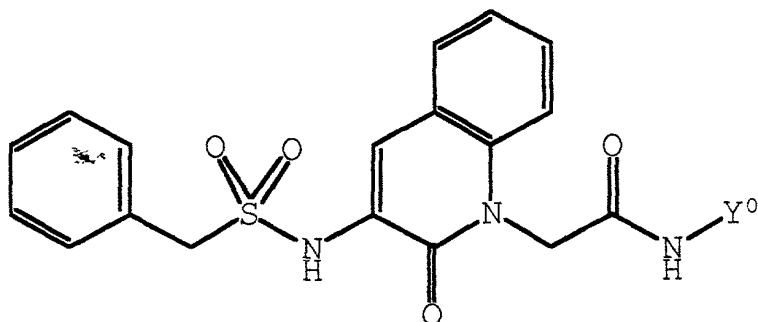
mL, 260.4 mmol) and pivaloyl chloride (28.06 mL, 227.8 mmol). After 15 minutes, the reaction mixture was allowed to warm to room temperature and stir overnight. The reaction mixture was poured onto ice, and the organic layer was washed with saturated NaHCO<sub>3</sub> (aq), and dried over Na<sub>2</sub>SO<sub>4</sub>. The volatile components were removed, and a brown oil was isolated. Crystallization with hexanes afforded 31 g of N-(pyrid-2-yl)-2,2-dimethylacetamide (**EX-5A**) as white crystals in 80% yield. Reference: Turner, J. A. *J. Org. Chem.* **1983**, 48, 3401.

**EX-5B**) A solution of **EX-5A** (2.00 g, 11.23 mmol) in THF (115 mL) at -78 °C was treated with n-BuLi (14.1 mL, 28.10 mmol of a 2.0 M solution in hexanes). The reaction mixture was allowed to warm to 0 °C and stir for 2h. The reaction mixture was again cooled to -78 °C, and the mixture was quenched with DMF (2.18 mL, 28.10 mmol). The reaction mixture was allowed to warm to room temperature and to stir overnight. The reaction mixture was poured into a slurry of ice and 6N HCl, and the acidified mixture was stirred for 15 minutes. The organic layer was separated (discard), and the aqueous layer was neutralized with K<sub>2</sub>CO<sub>3</sub> and extracted with ether (3 x 100 mL). The combined organic layers were washed with water, brine and dried over MgSO<sub>4</sub>. After filtration and evaporation of the volatiles, a yellow oil was isolated which solidified upon standing. 1.23 g (53%) of **EX-5B** product was isolated. Reference: Turner, J. A. *J. Org. Chem.* **1990**, 55, 4744.

**EX-5C**) A mixture of **EX-5B** (0.62 g, 3.01 mmol) and 3N HCl (30 mL) was refluxed overnight. After the reaction mixture was allowed to cool to room temperature, it was washed with ether (2 x 50 mL). The organic layer was discarded. The aqueous layer was neutralized with K<sub>2</sub>CO<sub>3</sub>, and extracted with ether (4 x 50 mL). The combined ether layers were dried over K<sub>2</sub>CO<sub>3</sub>, filtered, and concentrated to afford 2-aminopyridinecarboxaldehyde (**EX-5C**) as a yellow oil (0.36 g) which solidified upon standing. The crude material was used with any further purification. Reference: Moormann, A. E.; Yen, C. H.; Yu, S. *Syn. Commun.* **1987**, 17, 1695.

**EX-5D**) A mixture of hippuric acid (0.54 g, 3.01 mmol) and acetic anhydride (30 mL) was heated to 80 °C. After 2h, the reaction mixture was homogeneous. The hot reaction mixture was treated with a solution of **EX-5C**

**Example Table 1.** N-[Substituted]-(3-benzylsulfonylamino-2-oxo-2*H*-quinolin-1-yl)acetamides.

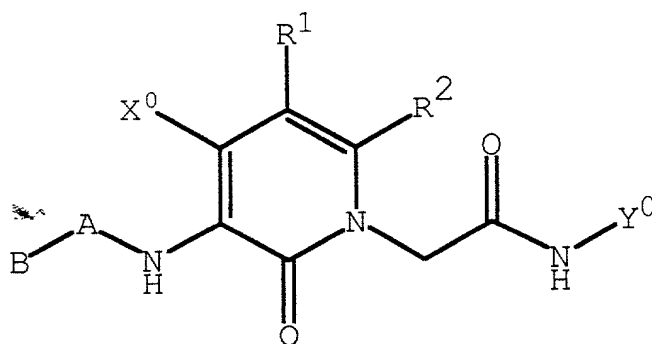


<u>Ex.No.</u>	<u>Y<sup>0</sup></u>
6	2-[4-Aminophenyl]ethyl
7	4-aminobutyl
8	5-aminopentyl
9	6-(N,N-dimethylamino)hexyl
10	4-Aminomethylbenzyl
11	3-Aminomethylbenzyl
12	3-[Imidazo-1-yl]propyl
13	2-[Imidazo-5-yl]ethyl
14	2-[Pyrid-3-yl]ethyl
15	3-[N-Methylpiperidin-4-yl]propyl
16	4-Aminobenzyl

5

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The pyridone analogs of the present invention have the general structure as shown in **Figure 2**.

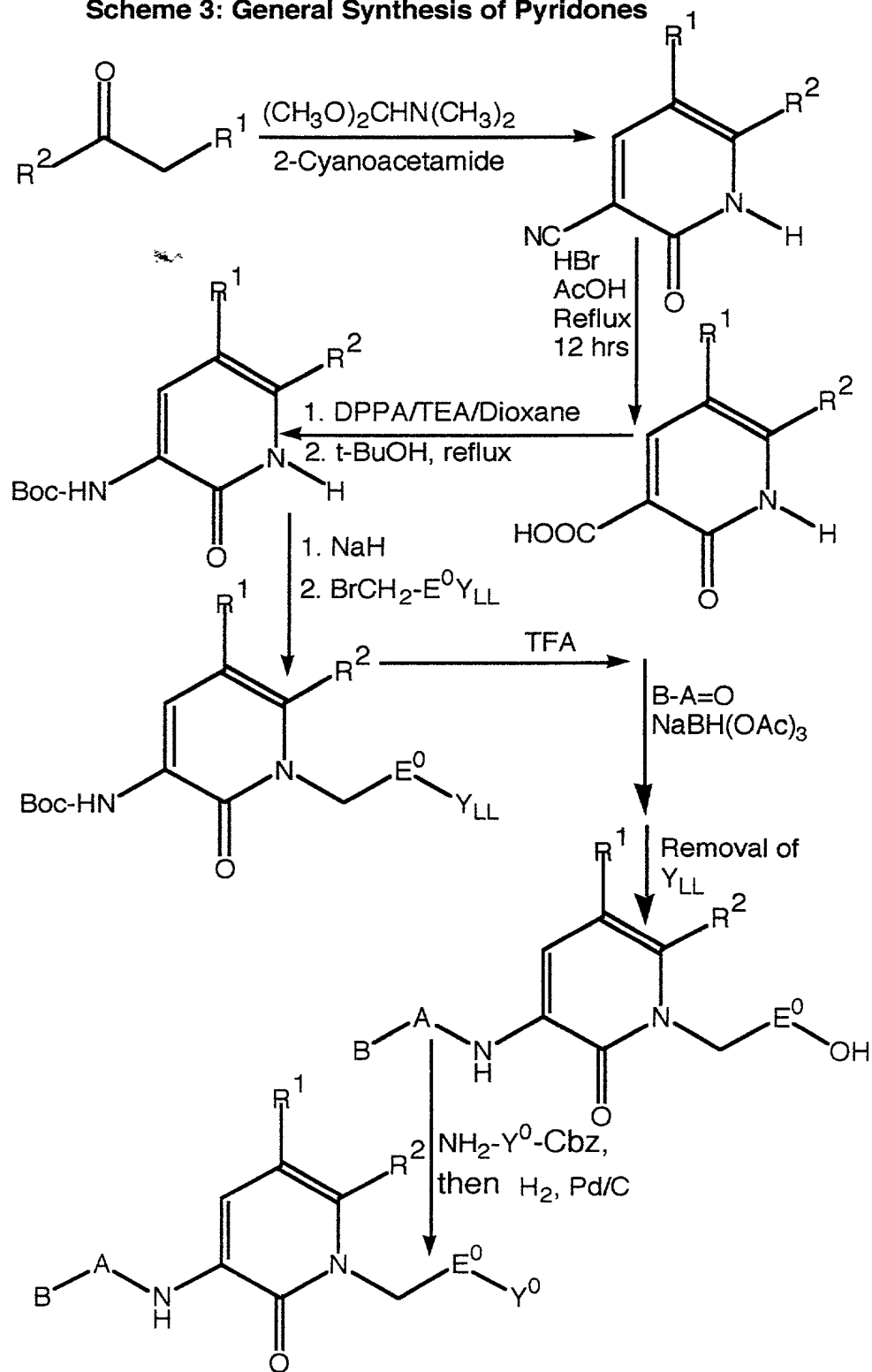


**Figure 2. General Structure of Pyridone Analogues**

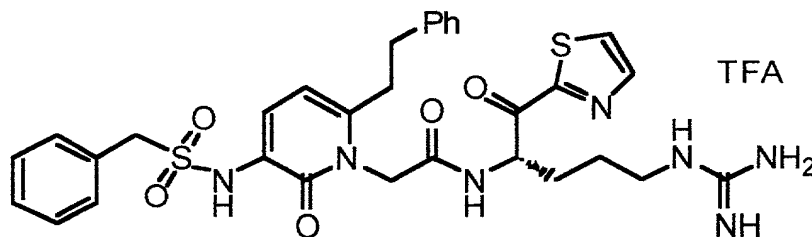
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A general synthetic route is illustrated in **Scheme 3** wherein substituents are as defined herein. These compounds are exemplified in **Examples 17 through 23**.

## Scheme 3: General Synthesis of Pyridones

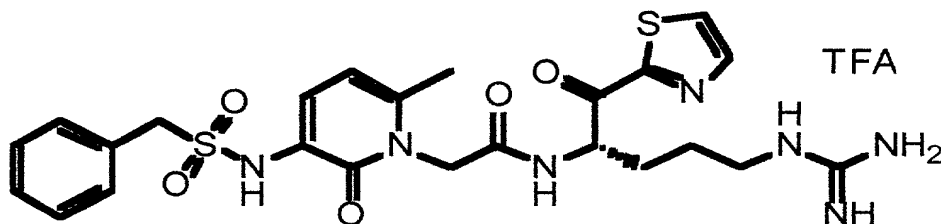


## Example 17



N-[[2(S)- 2-[1-hydroxy-1-(2-thiazolyl)]-5-[[[(4-methoxy-2,3,6-trimethyl)sulfonylamino]iminomethyl]amino]pentyl]-6-(2-phenylethyl)-2-oxo-3-  
 5 [[[(phenylmethyl)sulfonyl]amino]-1(2H)-pyridineacetamide (0.084 g, 0.098 mmol) was treated with 1,3-dihydro-1-hydroxy-3,3-bis(trifluoromethyl)-1-oxide-1,2-benziodoxole (0.0588 g, 0.147 mmole) in 1 ml acetonitrile. Similar work-up procedure as in preparing EX-1E was used to yield the oxidation product. The  
 10 oxidation product was treated with thioanisole (0.073 g, 0.59 mmol) and 3 ml trifluoroacetic acid for 6 hours. After removing the TFA, the residue was triturated in ether. It was purified by a preparative C-18 reverse HPLC column using a gradient that proceed from 5% to 95% acetonitrile in H<sub>2</sub>O in the presence of 0.1% TFA in 30 minutes to yield the product, N-[[2(S)- 2-[1-Oxo-1-(2-thiazolyl)]-5-  
 15 [[[(amino)iminomethyl]amino] pentyl]-6-(2-phenylethyl)-2-oxo-3-[[[(phenylmethyl)sulfonyl]amino]-1(2H)-pyridineacetamide trifluoroacetic acid salt, as a white amorphous solid (0.0232 g, y = 31 %). HPLC-MS (0 to 95% AcCN / 6 min @ 1.0 mL / Min @ 254 nm @ 50 °C): retention time 3.43 min, M+H<sup>+</sup> = 650.2 for formula C<sub>31</sub>H<sub>35</sub>N<sub>7</sub>O<sub>5</sub>S<sub>2</sub>.

## Example 18

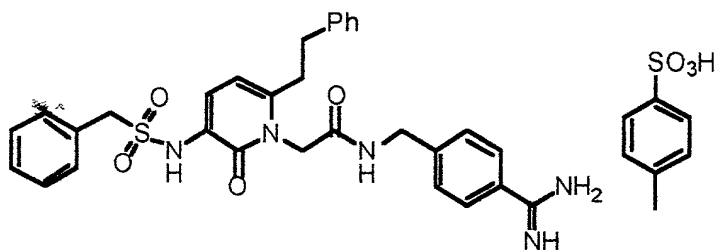


This compound, N-[[2(S)- 2-[1-Oxo-1-(2-thiazolyl)]-5-[(amino)imino-methyl]-amino] pentyl]-6-methyl-2-oxo-3-[[[(phenylmethyl)sulfonyl]amino]-1(2H)-pyridineacetamide trifluoroacetic acid salt, was prepared in a similar fashion as for



**Example 1.** HPLC-MS (0 to 95% AcCN / 6 min @ 1.0 mL / Min @ 254 nm @ 50 °C): retention time 2.69 min,  $M+H^+ = 560.3$  for formula  $C_{24}H_{29}N_7O_5S_2$ .

### Example 19

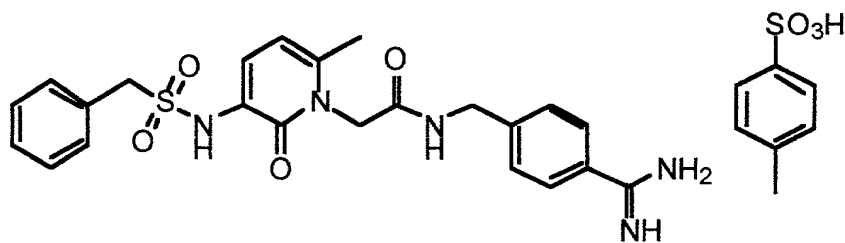


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The compound, N-[[4-(amino)iminomethyl]phenyl]methyl]-6-(2-phenylethyl)-2-oxo-3-[[[(phenylmethyl)sulfonyl]amino]-1(2H)-pyridineacetamide *p*-toluenesulfonic acid salt, was synthesized in a similar fashion as for **Example 2** using 6-(2-phenylethyl)-2-oxo-3-[[[(phenylmethyl)sulfonyl]amino]-1(2H)-pyridineacetic acid as starting material. HPLC-MS (0 to 95% AcCN / 6 min @ 1.0 mL / Min @ 254 nm @ 50 °C): retention time 3.23 min,  $M+H^+ = 558.5$  for formula  $C_{30}H_{31}N_5O_4S$ .  $^1H$  NMR (400 MHz,  $CD_3OD$ ):  $\delta$  2.36 (s, 3H), 2.92 (bm, 4H), 4.43 (s, 2H), 4.54 (s, 2H), 4.87 (s, 2H), 6.10 (d,  $J = 8.0$  Hz, 1H), 7.21 (m, 5H), 7.26-7.31 (m, 8H), 7.55 (d,  $J = 8.4$  Hz, 2H), 7.69 (d,  $J = 8.0$  Hz, 2H), 7.71 (d,  $J = 8.0$  Hz, 2H).

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### Example 20

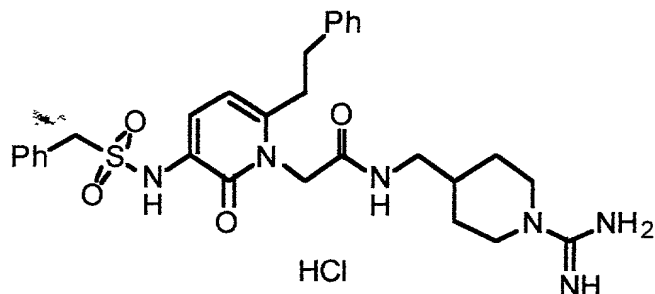


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This compound, N-[[4-(amino)iminomethyl]phenyl]methyl]-6-methyl-2-oxo-3-[[[(phenylmethyl)sulfonyl]amino]-1(2H)-pyridineacetamide *p*-toluenesulfonic acid salt, was synthesized in a similar fashion as for **Example 2** using 6-methyl-2-oxo-3-[[[(phenylmethyl)sulfonyl]amino]-1(2H)-pyridineacetic acid as starting material. HPLC-MS (0 to 95% AcCN / 6 min @ 1.0 mL / Min @ 254 nm @ 50 °C): retention time 2.41 min,  $M+H^+ = 468.1$  for formula  $C_{23}H_{25}N_5O_4S$ .  $^1H$  NMR (400 MHz,  $CD_3OD$ ):  $\delta$  2.34 (s, 3H), 2.36 (s, 3H), 4.43 (s, 2H), 4.53 (s, 2H), 4.87

(s, 2H), 6.15 (d,  $J = 7.6$  Hz, 1H), 7.21-7.31 (m, 8H), 7.56 (d,  $J = 8.4$  Hz, 2H), 7.69 (d,  $J = 8.0$  Hz, 2H), 7.72 (d,  $J = 8.0$  Hz, 2H), 8.70 (b, 1H), 9.19 (b, 1H).

### Example 21



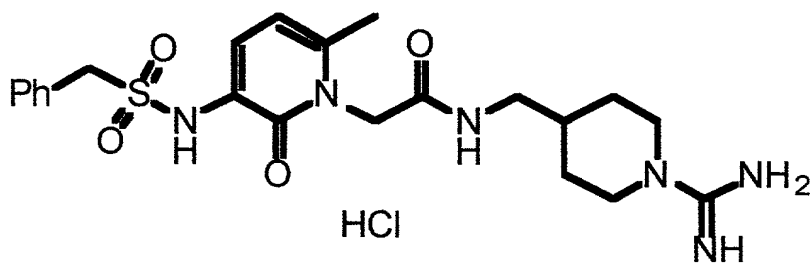
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This compound was synthesized in a similar fashion as for **Example 2** using 6-(2-phenylethyl)-2-oxo-3-[[[(phenylmethyl)sulfonyl]amino]-1(2*H*)-pyridineacetic acid as starting material and coupling it with 4-[1-(*N,N*-bis-Boc-amidino)piperidinyl]methylamine. The coupling product was treated with 4*N* HCl in dioxane to generate the product. The compounds were purified by reverse phase C-18 HPLC to generate the final pure products. HPLC-MS (0 to 95% AcCN / 6 min @ 1.0 mL / Min @ 254 nm @ 50 °C): retention time 3.10 min,  $M+H^+ = 565.6$  for formula  $C_{29}H_{37}N_6O_4S$ .

10

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### Example 22



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This compound was synthesized in a similar fashion as for **Example 2** using 6-methyl-2-oxo-3-[[[(phenylmethyl)sulfonyl] amino]-1(2*H*)-pyridineacetic acid as starting material and coupling it with 4-[1-(*N,N*-bis-Boc-amidino)piperidinyl]methylamine. The coupling product was treated with 4*N* HCl in dioxane to generate the product. The compounds were purified by reverse phase C-18 HPLC to generate the final pure products. HPLC-MS (0 to 95% AcCN / 6

5

One subclass of pyridone analogs have a heteroaryl group substituting the pyridone ring at the 5 or 6 position. **Scheme 4** illustrates a process to prepare heteroaryl substituted pyridones. The preparation procedure is exemplified in **Example 23** for the preparation of a 6-substituted pyridyl group although it will be readily recognized that a wide variety of substituted pyridines and other 5 and 6 membered heteroaryl groups can be introduced using the procedure described below.

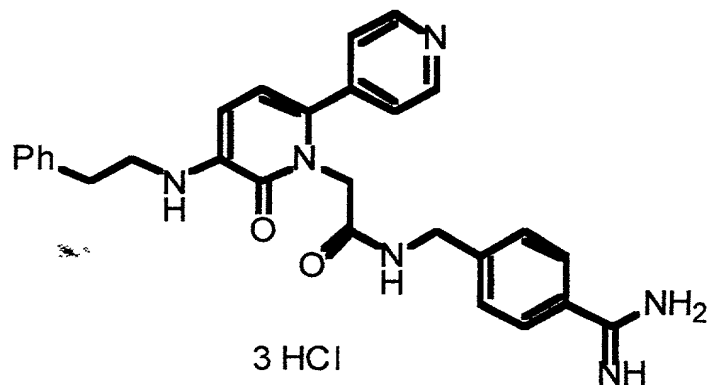
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**Scheme 4: Preparation of Heteroaryl Pyridones**

The scheme illustrates the synthesis of heteroaryl pyridones through several key steps:

- Starting material (a substituted pyridine-2-carboxamide derivative) reacts with  $(\text{CH}_3\text{O})_2\text{CHN}(\text{CH}_3)_2$  and 2-Cyanoacetamide to form an intermediate.
- The intermediate is treated with  $\text{HBr}/\text{AcOH}$  under reflux for 12 hours to yield a carboxylic acid derivative.
- The carboxylic acid derivative is converted to an ester using 1.  $\text{NaH}$ , 2.  $\text{BrCH}_2\text{CO}_2\text{CH}_3$ .
- The ester intermediate is treated with 1.  $\text{TFA}$ , 2.  $\text{B-CHO}$ , and 3.  $\text{NaBH}(\text{OAc})_3$  to form a bicyclic intermediate.
- The bicyclic intermediate is treated with  $\text{LiOH}$  to yield a carboxylic acid derivative.
- The carboxylic acid derivative is coupled with a benzylidene-protected diamine (containing a benzylidene group and a  $\text{NH-Cbz}$  group) using  $\text{EDC}/\text{HOBt}/\text{DIEA}$ .
- The final product is obtained by treatment with  $\text{H}_2$ ,  $\text{Pd/C}$ , and  $\text{HCl}$ , yielding the heteroaryl pyridone derivative (3 HCl).

## Example 23



**EX-23A)** One equivalent of commercially available 4-acetylpyridine is treated with three equivalents N, N-dimethylformamide dimethyl acetal in refluxing acetonitrile for 12 hours. After removing the solvent and excess amount of N, N-dimethylformamide dimethyl acetal, the resulting yellow solid is dissolved in DMF. To this solution is added one equivalent cyanoacetamide and two equivalents of sodium methoxide. The resulting mixture is heated at 100 °C for 5 hours. After cooling down, the reaction mixture is mixed with water and acidified with HCl to pH 5. The resulting yellow precipitate is filtered, washed with water and dried via vacuum to give the product **EX-23A** as a yellow solid.

**EX-23B)** Compound **EX-23A** is heated to reflux in one portion of 48% aqueous HBr and two portions of acetic acid for 12 hours. After the mixture is cooled down, mixed with water and adjusted the pH to 5, a light yellow precipitate is formed. The light yellow precipitate is filtered and washed with 1N HCl and water, dried via vacuum to give the product **EX-23B** as an off-white solid.

**EX-23C)** Compound **EX-23B** is treated with 1.1 equivalent of DPPA, 1 equivalent triethylamine in dioxane at refluxing temperature for two hours. Five equivalents t-butanol is added into the mixture, and the mixture is then refluxed overnight. After removing the solvent, the remaining residue is worked up by standard aqueous work-up procedure. The residue is then purified by silica gel column chromatography to yield Compound **EX-23C**.

**EX-23D)** Compound **EX-23C** is mixed with one equivalent sodium hydride in DMF and one equivalent methyl bromoacetate subsequently. After stirring at ambient temperature for 12 hours, the reaction is worked up by standard procedure. The product **EX-23D** is purified by silica gel column chromatography.

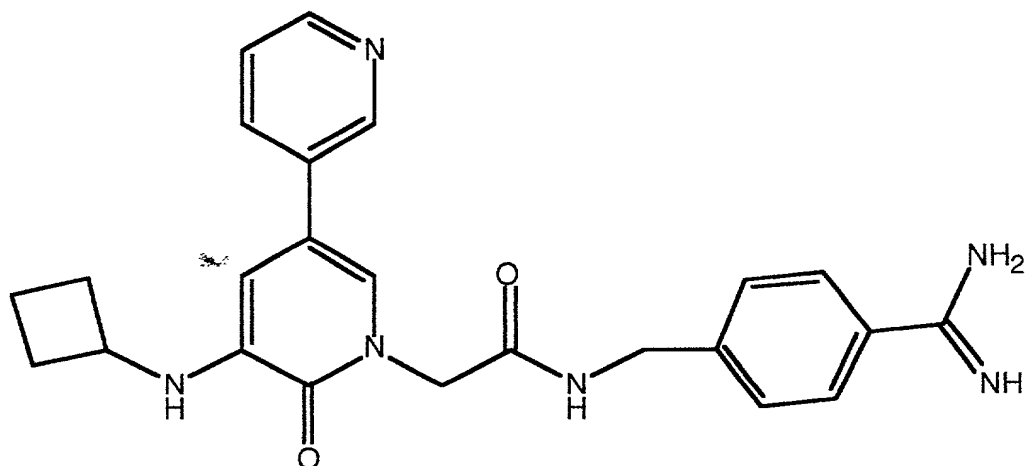
**EX-23E)** Compound **EX-23D** is treated with 50% TFA in dichloromethane for 1 hour. After removing the solvent and TFA, the residue is redissolved in THF with one equivalent of triethylamine. To this solution is added one equivalent phenylacetaldehyde and two equivalents sodium triacetoxyborohydride. After stirring for 12 hours, the reaction is quenched with addition of aqueous ammonium chloride. Standard aqueous work-up and silica gel column chromatography yields the desired product **EX-23E**.

**EX-23F)** Compound **EX-23E** is treated with 1M LiOH in 1: 1: 1 ratio of THF, methanol and water for half hour. After it is acidified with 1N HCl, the organic solvent is removed and a precipitate will form. The precipitate is filtered, washed with water and dried by vacuum to give the desired product **EX-23F**. Compound **EX-23F** is treated with one equivalent EDC and HOBt in the presence of three equivalents diisopropylethylamine in DMF for 10 minutes. One equivalent of 4-aminomethylbenzamidinium, which is protected with Cbz at the amidine, is then added into the reaction mixture. After stirring at ambient temperature for four hours, the reaction mixture is worked up by standard procedure and the product **EX-23G** is purified by silica gel column chromatography.

Compound **EX-23G** is dissolved in methanol in the presence of 5 equivalents of HCl and 5% equivalent of 10% Pd /C. The mixture is stirred under an atmosphere of hydrogen (ambient pressure) for five hours. After filtration and removing the solvent, Compound **23** is obtained as the pure product.

In a related procedure, 5-substituted pyridones can be prepared as illustrated in **Examples 24** and **25**.

## Example 24



**EX-24A)** 3-Nitro-2-hydroxypyridine (49.5 g, 0.35 mol) and 10% Pd/C (4.21 g, 4 mmol) in 500 ml ethanol was stirred under an atmosphere of hydrogen introduced via a balloon for 24 hours. After filtering through a pad of Celite 545 and removing the ethanol, a brown solid was obtained as the pure product, 3-aminopyrid-2-one, (38 g, 97%). HPLC-MS (0 to 30% AcCN / 6 min @ 1.0 mL / Min @ 254 nm @ 50 °C): retention time 0.097 min,  $M+H^+ = 111.1$  for formula  $C_5H_7N_2O$ .

**EX-24B)** Compound **EX-24A** (27.25 g, 0.248 mol) was treated with Boc anhydride (59.47 g, 0.272 mol), triethylamine (52 ml, 0.372 mol) and DMAP (1.5 g, 12.4 mmol) in 500 ml DCM for 4 hours. After an aqueous work-up and removing the solvent, the residue was passed through a short silica gel plug using 40% ethylacetate in hexane as eluent to yield the crude product (28 g, 56%). Pure product, 3-(N-Boc-amino)pyrid-2-one, was obtained by recrystallization in acetone as a needle-like white crystalline solid. HPLC-MS (0 to 95% AcCN / 6 min @ 1.0 mL / Min @ 254 nm @ 50 °C): retention time 2.39 min,  $M\text{-Boc} + H^+ = 111.1$  for formula  $C_5H_7N_2O$ .  $^1H$  NMR (400 MHz,  $CDCl_3$ ):  $\delta$  1.52 (s, 9H), 6.32 (t,  $J = 7.2$  Hz, 1H), 7.00 (dd,  $J = 6.4, 1.6$  Hz, 1H), 7.55 (s, 1H), 8.10 (d,  $J = 6.4$  Hz, 1H), 12.86 (b, 1H).  $^{13}C$  NMR (101 MHz,  $CDCl_3$ ):  $\delta$  28.2, 80.8, 107.7, 121.8, 125.2, 129.7, 152.7, 158.8.

**EX-24C)** Compound **EX-24B** (13.58 g, 64.6 mmol) and N-iodosuccinimide (21.8 g, 97 mmol) in 250 ml dichloromethane was stirred at room temperature for 18 hours. After filtration to remove the by-product succinimide, the

solvent was removed under reduced pressure. The remaining residue was subjected to a silica gel flash chromatography to yield a brown solid as the product, 3-(N-Boc-amino)-5-iodopyrid-2-one, (17.3 g, 80%). HPLC-MS (0 to 95% AcCN / 6 min @ 1.0 mL / Min @ 254 nm @ 50 °C): retention time 3.22 min,  $M + Na^+ = 359.0$

5 for formula  $C_{10}H_{13}IN_2O_3Na$ .

**EX-24D)** Compound **EX-24C** (9.62 g, 28.6 mmol) was treated with sodium hydride (1.71 g, 42.9 mmol) 60% in mineral oil in 200 ml THF for 10 minutes. To this mixture was added methyl bromoacetate (4.33 ml, 45.8 mmol). The resulting structure was stirred at room temperature for 1 hour. After removing  
10 the THF, the residue was washed with hexanes to remove the mineral oil. It was then partitioned between ethylacetate and saturated aqueous ammonium chloride. The organic layer was washed with saturated aqueous ammonium chloride three times and dried over anhydrous  $MgSO_4$ . After removing the solvent, a yellow amorphous solid was obtained as the product, methyl 2-[3-(N-Boc-amino)-5-iodo-  
15 2-oxopyrid-2-yl]acetate, (11.1 g, 95%).

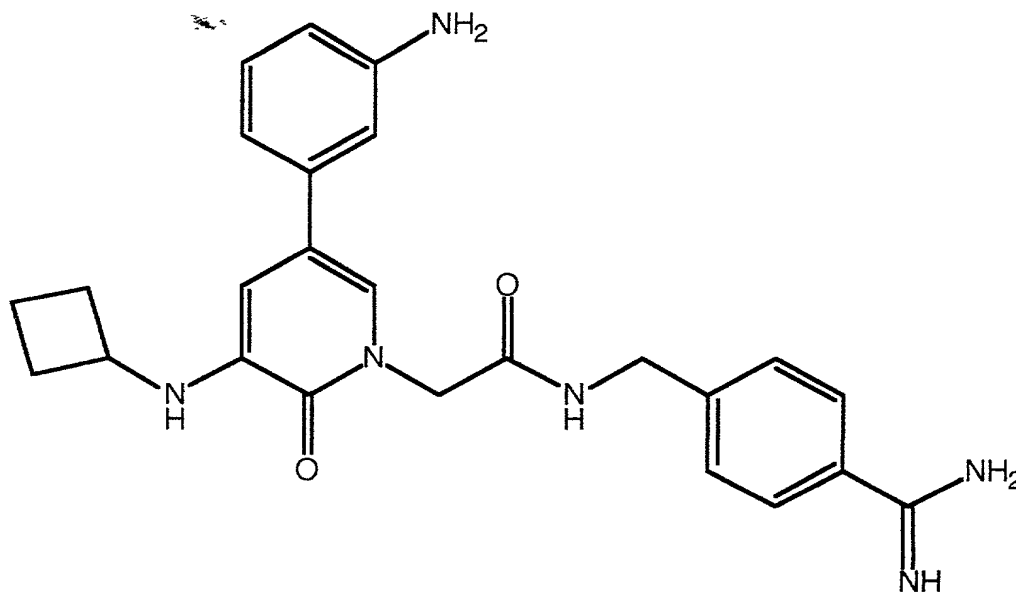
**EX-24E)** 3-Pyridyl boronic acid (2.0 g, 4.93 mmol) was suspended in 80 ml toluene and the mixture was degassed by bubbling nitrogen through for 10 minutes. Tetrakis-(triphenyl)phosphine Palladium (0.54 g, 0.46 mmol) was dissolved in a pre-degassed mixture of 20 ml toluene and 50 ml methanol. The  
20 catalyst solution was added to the boronic acid solution under nitrogen. To this resulting mixture was added compound **EX-24D** (3.80 g, 9.31 mmol) in 25 ml methanol followed with 22 ml 2M  $Na_2CO_3$  solution. The reaction solution was heated to reflux for 2.5 hours. After it was cooled down to room temperature, it was mixed with 10 ml 2.5N NaOH and was stirred for an half hour. After removing all  
25 the solvent, the remaining residue was re-dissolved in methanol and the pH of the solution was adjusted to 6 with 1 N HCl. After removing all the solvent, the residue was absorbed on silica gel and subjected to silica gel flash chromatography using 5% methanol in DCM as the eluate. The pure product, methyl 2-[3-(N-Boc-amino)-5-(pyrid-3-yl)-2-oxopyrid-2-yl]acetate (**EX-24E**), was obtained as a white  
30 amorphous solid (1.01 g, 57%). HPLC-MS (5 to 95% AcCN / 6 min @ 1.0 mL / Min @ 254 nm @ 50 °C): retention time 1.89 min,  $M+H^+ = 346.0$  for formula  $C_{17}H_{19}N_3O_5$ .  $^1H$  NMR (400 MHz,  $CDCl_3$ ):  $\delta$  1.53 (s, 9H), 4.82 (s, 2H), 7.62 (d, J = 2.4 Hz, 1H), 7.87 (t, J = 6.0, 1H), 8.36 (s, 1H), 8.47 (d, J = 8.4 Hz, 1H), 8.68 (d,



$J = 4.4$  Hz, 1H), 9.05 (s, 1H).  $^{13}\text{C}$  NMR (101 MHz,  $\text{CDCl}_3$ ):  $\delta$  28.0, 50.9, 81.6, 113.8, 117.3, 126.5, 128.9, 130.4, 136.4, 139.8, 140.4, 140.6, 152.7, 156.6, 169.0.

Starting with the intermediate **EX-24E**, the final inhibitor compound is synthesized in a similar fashion as described in other examples by procedures  
5 described above.

### Example 25



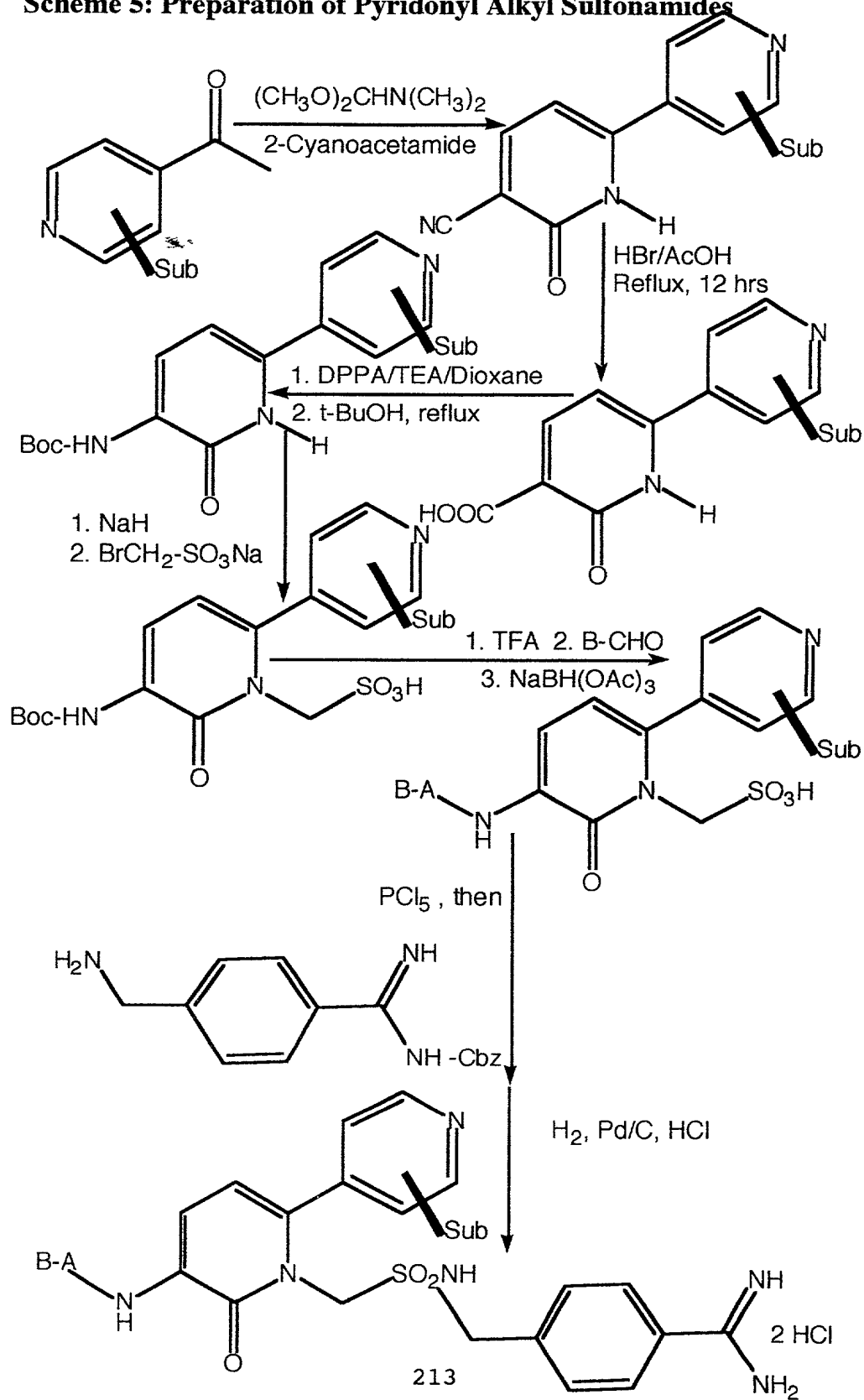
**EX-25A**) 3-Nitrobenzeneboronic acid (1.41 g, 8.43 mmol) was suspended in 50 ml dioxane and the mixture was degassed with nitrogen. Tetrakis-  
10 (triphenyl)phosphine Palladium (0.406 g, 0.35 mmol) dissolved in 10 ml dioxane was added to the boronic acid solution under nitrogen. To this mixture was added compound **EX-24D** (2.87 g, 7.03 mmol) and 7 ml 2M potassium phosphate solution. The reaction mixture was heated to reflux for 3 hours. After removing the dioxane, the remaining residue was partitioned between ethylacetate and aqueous  
15 saturated ammonium chloride. The organic layer was washed with aqueous saturated ammonium chloride and dried over sodium sulfate. The pure product was isolated by a silica gel column flash chromatography to yield a yellow crystalline solid (1.13 g, 40%). The product, methyl 2-[3-(N-Boc-amino)-5-(3-nitrophenyl)-2-oxopyrid-2-yl]acetate, showed one peak on LC-MS. However, it is a mixture of  
20 two isomers with a ratio of 2.8 to 1 based on  $^1\text{H}$  NMR and  $^{13}\text{C}$  NMR. One isomer has the nitro group at the same side of the Boc amino group, the other in the opposite direction. The NMR data only lists the dominant isomer here. HPLC-MS

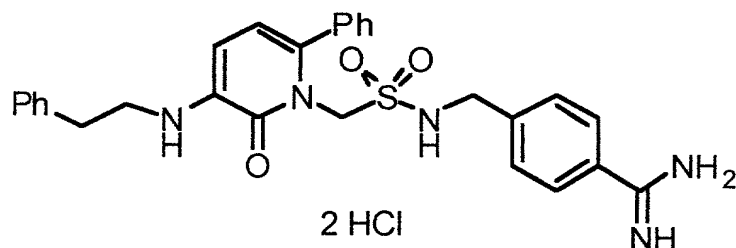
(5 to 95% AcCN / 6 min @ 1.0 mL / Min @ 254 nm @ 50 °C): retention time 3.74 min,  $M+Na^+ = 426.3$  for formula  $C_{19}H_{21}N_3O_7Na$ .  $^1H$  NMR (400 MHz,  $CDCl_3$ ): d 1.50 (s, 9H), 3.82 (s, 3H), 4.80 (s, 2H), 7.20 (d,  $J = 2.4$  Hz, 1H), 7.56 (t,  $J = 8.0$ , 1H), 7.66 (s, 1H), 7.81 (d,  $J = 8.0$  Hz, 1H), 8.15 (d,  $J = 8.0$  Hz, 1H), 8.28 (d,  $J = 2.4$  Hz, 1H), 8.36 (s, 1H).

Starting with the intermediate **EX-25A**, the final inhibitor compound is synthesized in a similar fashion as described in other examples by procedures described above.

Preparation of sulfonyl analogs of pyridones of the present invention in which a sulfonyl replaces the carbonyl group of the N-1 acetamide side chain can be accomplished by use of the general procedure in **Scheme 3**. **Example 26**, a specific example of a sulfonamide of the present invention, is synthesized as according to the general procedure shown in **Scheme 5**.

# **Scheme 5: Preparation of Pyridonyl Alkyl Sulfonamides**



**Example 26**

Compound **EX-26C** can be prepared using same methods as described in **Example 23** for compounds **EX-23A**, **EX-23B**, and **EX-23C**.

- 5       **EX-26D)** Compound **EX-26C** is treated with 1.1 equivalent NaH and 1.5 equivalents sodium bromomethanesulfonate in DMF overnight. The reaction is quenched by dilution with water and addition of 1N HCl to adjust the reaction solution to a pH of 3 to precipitate the product. The crude product is obtained by filtration and washing with water and ether. The pure product **EX-26D** is further
- 10       purified by recrystallization in ethanol.

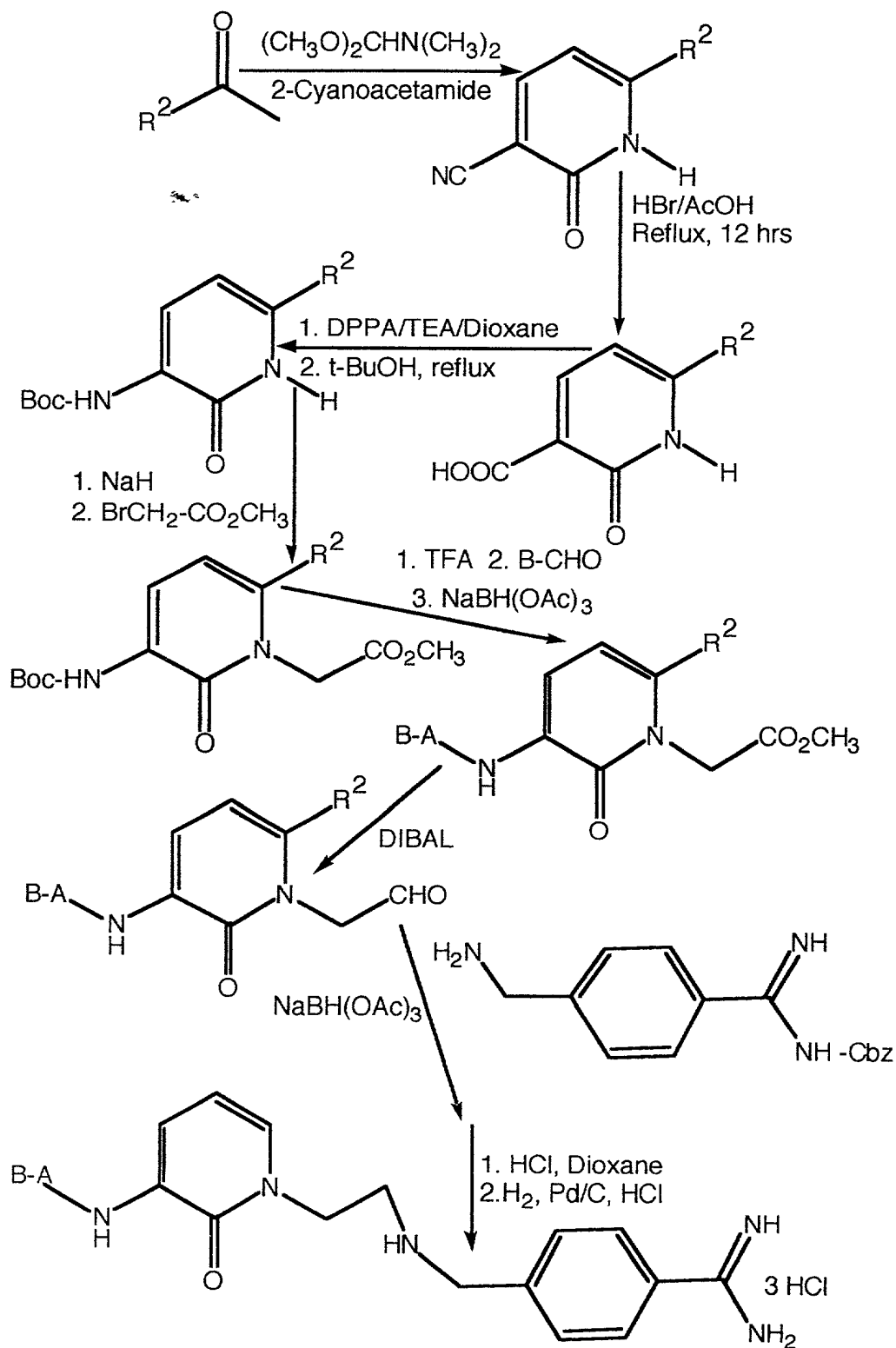
- EX-26E)** Compound **EX-26D** is treated with 50% TFA in dichloromethane for 1 hour. After removing the solvent and TFA, the residue is redissolved in THF/Methanol with one equivalent of triethylamine. To this solution is added one equivalent phenylacetaldehyde and two equivalents sodium triacetoxyborohydride.
- 15       After stirring for 12 hours, the reaction is quenched with addition of aqueous ammonium chloride. Standard aqueous work-up and silica gel column chromatography yields the desired product **EX-26E**.

- EX-26F)** Compound **EX-26E** is treated with one equivalent  $\text{PCl}_5$  in toluene for an half hour. One equivalent of 4-aminomethylbenzamidine, which is protected with Cbz at the amidine, is then added into the reaction mixture followed with the
- 20       addition of five equivalents pyridine. The mixture is allowed to be stirred for 12 hours. The reaction mixture is worked up by standard procedure and the product **EX-26F** is purified by silica gel column chromatography.

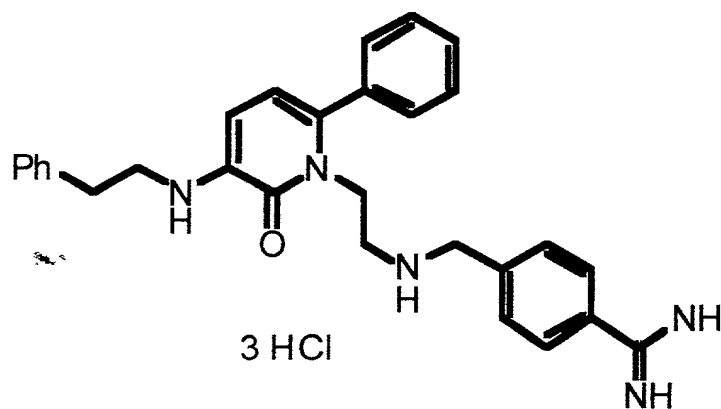
- Compound **26** is prepared from **EX-26F** using the procedure for compound
- 25       **23** in **Example 23**.

- Preparation of methylene analogs of pyridones of the present invention in which a methylene replaces the carbonyl group of the N-1 acetamide side chain can be accomplished by using the essential features of the general procedure in **Scheme 3**. **Example 27**, a specific example of an ethyleneamine of the present invention,
- 30       can be synthesized as shown specifically in **Scheme 6**.

# **Scheme 6: Preparation of Ethylene Pyridone Analogs**



## Example 27



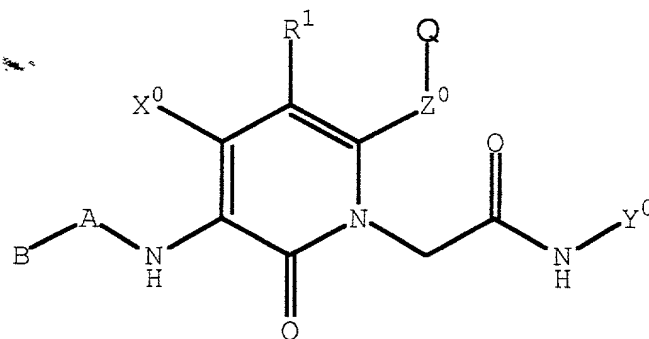
**EX-27A)** To a ether solution of pyridinylacetate ester with the B-A group added, diisobutylaluminum hydride (5 eq.) is added at  $-78^{\circ}\text{C}$ . After 30 minutes stirring, methanol is added to quench the reaction. The resulting mixture is poured into a saturated aqueous solution of Rochelle salt. The layers are separated, and the aqueous layer is extracted with ethyl ether. The combined extract is dried over  $\text{MgSO}_4$ , and the solvent is evaporated to dryness. The remaining residue is subjected to a silica gel column chromatography to yield the pure product aldehyde (**EX-27A**).

**EX-27B)** Compound **EX-27A** is mixed with one equivalent of Cbz protected 4-amidinobenzylamine and two equivalents sodium triacetoxyborohydride in THF. The reaction mixture is worked up according to the standard procedure. The product **EX-27B** is purified by silica gel column chromatography.

Compound **EX-27B** is first treated with 4N HCl in dioxane for 4 hours. After removing the dioxane, the residue is redissolved in methanol in the presence of 5 equivalents of HCl and 5% equivalent of 10 % Pd /C. The mixture is stirred under an atmosphere of hydrogen (ambient pressure) for five hours. After filtration and removing the solvent, the compound is obtained as the pure product.

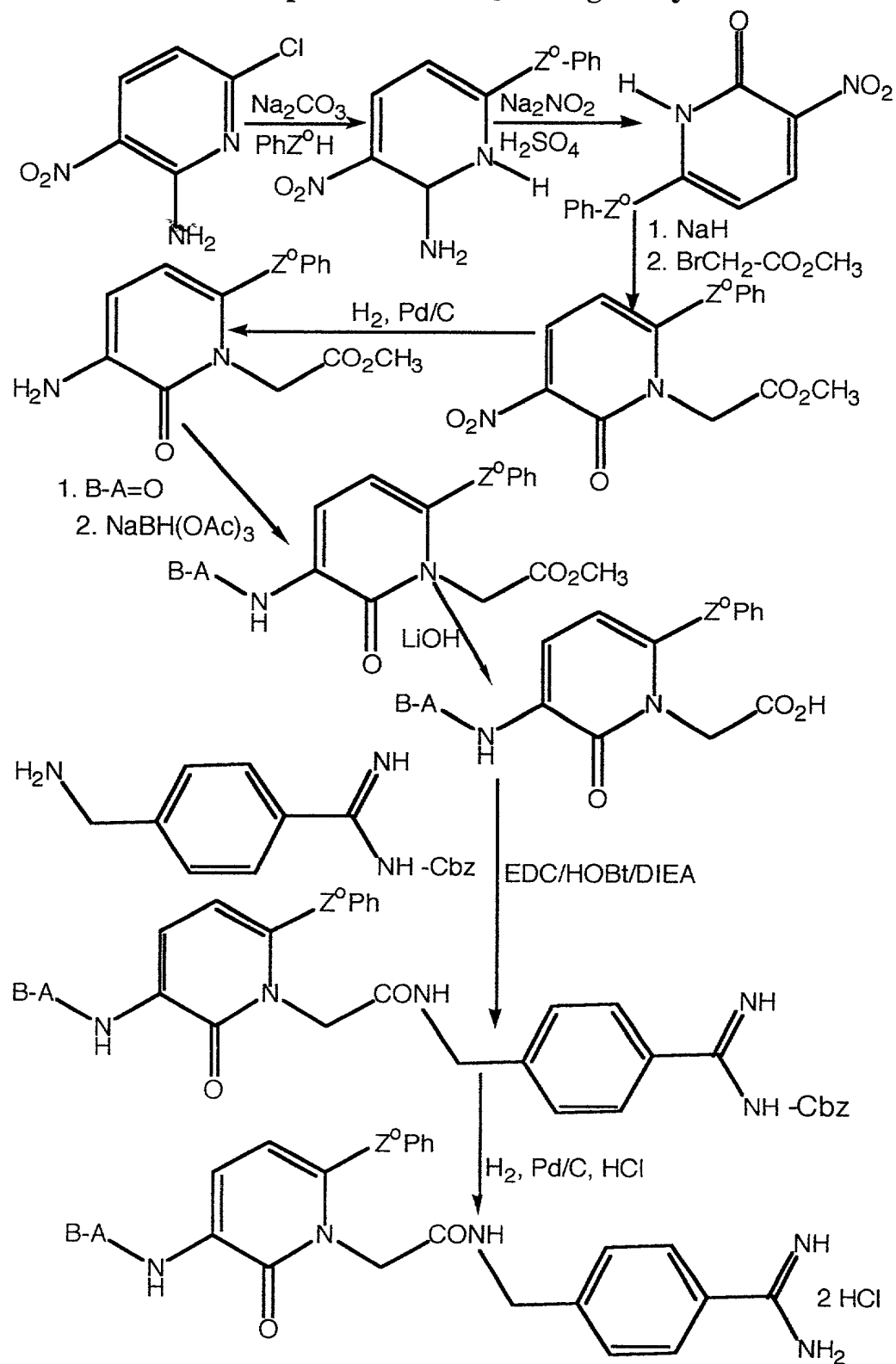
Another subclass of pyridone analogs have the general structure as shown in **Figure 3**. Substituents are defined as disclosed herein.  $Z^0$  can be heteroatoms such as S, O, N, and others. The synthesis of this subclass of pyridone analogs is exemplified as in the synthesis of **Example 28** as summarized in **Scheme 7**.

5

**Figure 3**

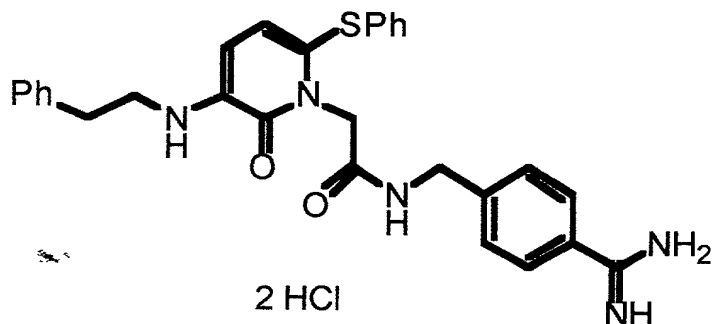
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# **Scheme 7. Preparation of Z<sup>o</sup>-Q Analogs of Pyridones**





## Example 28



**EX-28A)** Commercially available compound **2-amino-3-nitro-6-chloropyridine** is reacted with one equivalent of phenylthiol in the presence of sodium carbonate in DMF at 80 °C. After the completion of the reaction, the reaction mixture is mixed with water. Filtration yields the crude product **EX-28A** that can be purified by recrystallization in methanol.

**EX-28B)** Compound **EX-28A** is dissolved in 12N H<sub>2</sub>SO<sub>4</sub>, and the solution is treated with aqueous solution of NaNO<sub>2</sub> (3 eq.) firstly at 0 °C, then at 100 °C. Dilution with water precipitates the product. Filtration and washing with water and ether yields the crude product **EX-23B** that can be further purified by recrystallization in ethanol.

**EX-28C)** Compound **EX-28B** is mixed with one equivalent sodium hydride in DMF and one equivalent methyl bromoacetate subsequently. After stirring at ambient temperature for 12 hours, the reaction is worked up by standard procedure. The product **EX-28C** is purified by silica gel column chromatography.

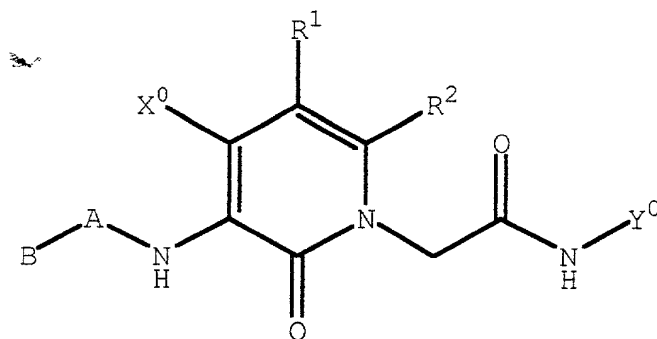
**EX-28D)** Compound **EX-28C** is dissolved in methanol in the presence of 5% equivalent of 10% Pd /C. The mixture is stirred under an atmosphere of hydrogen (ambient pressure) for an half hour. After filtration and removing the solvent, Compound **EX-28D** is obtained as the pure product.

Example compound **28** can be prepared from **EX-28D** in a similar fashion as described in the preparation of compounds **EX-23E**, **EX-23F**, **EX-23G** and **23**.

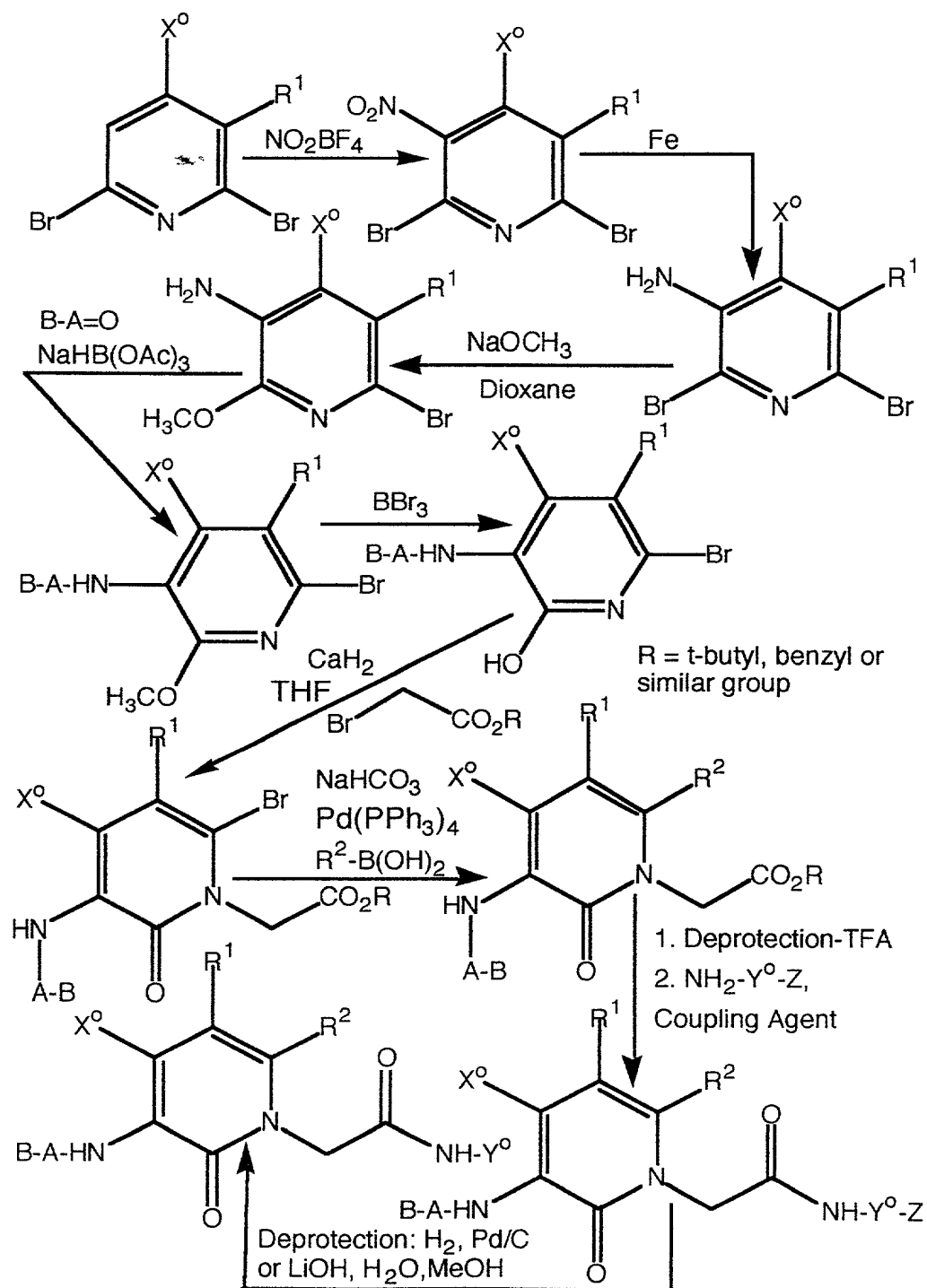
Another subclass of pyridone analogs have the general structure as shown in **Figure 4**. Pyridones, wherein a wide variety of R<sup>2</sup> substituents can be prepared by a metal catalyzed coupling reaction of a 6-bromo group in an appropriately substituted intermediate pyridone, can be prepared using the general procedures and

processes shown in **Scheme 8** and as illustrated below in specific **Example 29**.  $R^2$  groups may be aryl and heteroaryl and substituents for these may include, for example, amino, substituted amino, carboxy, carboxamido, sulfonylamido, and the likes.

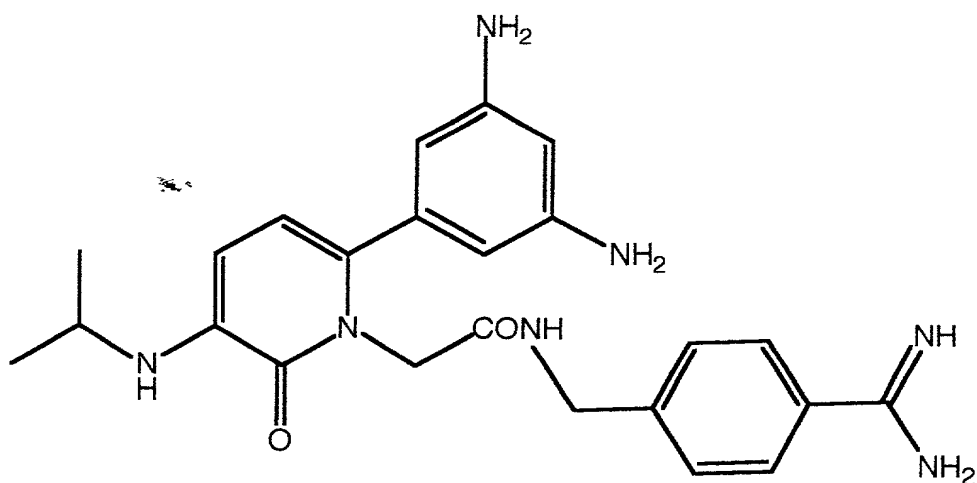
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**Figure 4**

**Scheme 8: Introduction of R<sup>2</sup> Groups into Pyridone Intermediates and the Resulting Products**



## Example 29



A solution of 2,6-dibromopyridine (10.0 g, 42 mmol) and nitronium  
 5 tetrafluoroborate (11.2 g, 84 mmol) in acetonitrile was heated to reflux for 18 hours.  
 The brown reaction was allowed to cool to room temperature and was diluted with  
 50 mL of a saturated sodium bicarbonate solution. The solution was washed with  
 water, brine, dried over magnesium sulfate, and filtered. The solvent was removed  
 by evaporation to afford the crude product. The product was purified by column  
 10 chromatography (10% ethyl acetate-hexane) to afford 4.76 g (40%) of a white solid  
 of product **EX-29A**; MS (ES,  $m/z$ ) 281 (M+H).

The nitro compound **EX-29A** (6.8 g, 24.3 mmol) was stirred in glacial  
 acetic acid. Powdered iron (6.7 g, 119 mmol) was added and the solution was  
 heated to 80°C with vigorous stirring. The solution was stirred at 80°C for 15  
 15 minutes at which point the iron had turned gray. The reaction mixture was filtered  
 through celite and the solid was washed with ether and ethyl acetate. The resultant  
 organic layer was washed with water, brine, dried over magnesium sulfate, and  
 filtered. The solvent was removed to afford the crude product. The product was  
 purified by column chromatography (20% ethyl acetate-hexane) to afford 5.26 g  
 20 (87%) of a white solid of product **EX-29B**; MS (ES,  $m/z$ ) 251 (M+H).

A solution of the 3-amino-2,6-dibromopyridine **EX-29B** (4.0 g, 16 mmol)  
 and sodium methoxide (4.3 g, 80 mmol) in dioxane was heated to reflux for 12  
 hours. The brown reaction was allowed to cool to room temperature and diluted  
 with water. The solution was extracted with ether and the organic layer was washed

with water, brine, dried over magnesium sulfate, and filtered. The solvent was removed by evaporation to afford the crude product. The product was purified by column chromatography (20% ethyl acetate-hexane) to afford a white solid of product **EX-29C**; MS (ES,  $m/z$ ) 204 (M+H).

- 5 Sodium triacetoxyborohydride (43.0 mmol) was added to a solution of the the 3-amino-2-methoxy-6-bromopyridine **EX-29C** (11.0 mmol), acetone (13.6 mmol) and a drop of acetic acid in a tetrahydrofuran-dichloromethane (1:1) solution. After stirring at room temperature for 14 hours additional acetone (1.0 mL, 13.6 mmol) and acetic acid (excess) was added and the solution stirred at room
- 10 temperature for 18 hours. The solution was diluted with ether and water. The organic layer was washed with brine, dried over magnesium sulfate, and filtered. The solvent was removed by evaporation to afford the crude product. The product was purified by column chromatography (15% ethyl acetate-hexane) to afford a yellow oil of isopropylaminopyridine product **EX-29D**; MS (ES,  $m/z$ ) 245 (M+H).
- 15 Boron tribromide 1M (2.7 mL, 2.7 mmol) was added to a solution of the isopropylaminopyridine product **EX-29D** (0.50 g, 0.88 mmol) in dichloromethane at -10°C. The reaction mixture was diluted with water and extracted with ether. The organic layer was washed with water, brine, dried over magnesium sulfate, and filtered. The solvent was removed by evaporation to afford the crude product. The
- 20 product was purified by column chromatography (20% ethyl acetate-hexane) to afford a white solid of product **EX-29E**; MS (ES,  $m/z$ ) 231 (M+H).

- A suspension of  $\text{CaH}_2$  (40.96 mmol) in tetrahydrofuran was added to the hydroxycy pyridine **EX-29E** (20.68 mmol) in tetrahydrofuran dropwise via an addition funnel. The resulting suspension was heated to reflux for 30 minutes. The
- 25 mixture was then added a solution of *tert*-butyl bromoacetate (3.40 mL, 23.03 mmol) in tetrahydrofuran (2.3 M). Refluxing of the mixture was continued for 18 hours. The reaction mixture was allowed to cool to room temperature, and the cautiously poured in to a stirred ice water mixture. The aqueous layer was extracted with ethyl acetate. The organic layer was washed with water, brine, dried over
- 30 magnesium sulfate, and filtered. The solvent was removed by evaporation to afford the crude product. The product was purified by column chromatography (20% ethyl acetate-hexane) to afford a white solid of the *tert*-butyl ester product **EX-29E**; MS (ES,  $m/z$ ) 345 (M+H).

A mixture of the *tert*-butyl ester pyridone **EX-29E** (14.05 mmol) and

3-amino-5-nitrophenylboronic acid (15.10 mmol) in THF was stirred for 10 minutes under an atmosphere of nitrogen. Sodium carbonate (16.8 mmol) was added followed by tertakis(triphenylphosphine)-palladium(0) (10 mol%). The resulting mixture was allowed to stir for 5 minutes at room temperature, then heated to reflux for 18 hours. The reaction mixture was allowed to cool to room temperature and was diluted with ethyl acetate. The organic layer was washed with water, brine, dried over magnesium sulfate, and filtered. The solvent was removed by evaporation to afford the crude product. The product was purified by column chromatography to afford a clear oil of product **EX-29F**; MS (ES,  $m/z$ ) 503 (M+H).

A solution of the 6-phenylpyridone *tert*-butyl ester **EX-29F** (6.996 mmol) in dry chloroform was added trifluoroacetic acid (70.09 mmol) in one portion at room temperature. The resulting clear yellow solution was allowed to stir over night. The solvent was removed under reduced pressure and trituration from ethyl ether/hexanes afford pure product **EX-29G** as a tan solid; MS (ES,  $m/z$ ) 447 (M+H)

**R-2** PS-carbodiimide (1.00 mmol/g) (1.4 mmol) was added to a slurry of the acid **EX-29G** (0.71 mmol), 1-hydroxybenzotriazole (0.71 mmol), 4-(N-benzoyloxycarbonylamidino)benzylamine hydrochloride (0.84 mmol), and N-methylmorpholine (5.6 mmol) in a dichloromethane-dimethylformamide (3:1) solution, and the suspension was agitated for 3 hours. Upon completion of the reaction, the **R-1** polyamine resin (2.81 mmol/g) (5.6 mmol) and polymer-bound aldehyde **R-3** (2.3 mmol/g) (2.30 mmol) were added, and the suspension was agitated for 1 hour. The solution was filtered, and the polymer was rinsed with dimethylformamide and dichloromethane until no more UV activity was seen in the dichloromethane washing. The solvent was removed under reduced pressure, and trituration from ethyl ether/hexanes afforded pure product **EX-29H** as a white solid; MS (ES,  $m/z$ ) 712 (M+H).

A catalytic amount of palladium on carbon (5%) in dioxane was added to 3 mL of a methanol-4N hydrochloric acid/dioxane (3:1) solution of the protected pyridinone compound **EX-29H** (0.88 mmol), and the mixture was stirred under a balloon of hydrogen at room temperature for 12 hours. The mixture was filtered through celite, and the solvent was evaporated to afford the product. The product was purified by reverse-phase chromatography to afford a white solid of product; MS (ES,  $m/z$ ) 448 (M+H).

Using the examples and methods described herein previously, the following examples having an amidinoaralkyl or amidinoheteroaralkyl type  $Y^o$  group could be prepared:

- 5        N-[[4-aminoiminomethylphenyl]methyl]-2-[1-[6-[3-aminophenoxy]-4-chloro-3-[N,N-dimethylhydrazino]-2-oxo-1(2H)-pyridinyl]]acetamide;
- N-[[4-aminoiminomethylphenyl]methyl]-2-[1-[6-[3-aminophenoxy]-3-[N-ethyl-N-methylhydrazino]-4-fluoro-2-oxo-1(4H)-pyridinyl]]acetamide;
- N-[[4-aminoiminomethylphenyl]methyl]-2-[1-[6-[3-aminophenoxy]-3-[N,N-diethylhydrazino]-2-oxo-1(4H)-pyridinyl]]acetamide;
- 10       N-[[4-aminoiminomethylphenyl]methyl]-4-chloro-2-[1-[6-[3,5-diaminophenoxy]-3-[N,N-dimethylhydrazino]-2-oxo-1(2H)-pyridinyl]]acetamide;
- N-[[4-aminoiminomethylphenyl]methyl]-2-[1-[6-[3-aminophenylthio]-3-[N,N-dimethylhydrazino]-2-oxo-1(2H)-pyridinyl]]acetamide;
- 15       N-[[4-aminoiminomethylphenyl]methyl]-2-[1-[6-[3-aminophenylthio]-3-[N,N-dimethylhydrazino]-4-fluoro-2-oxo-1(2H)-pyridinyl]]acetamide;
- N-[[4-aminoiminomethylphenyl]methyl]-2-[1-[6-[3-amino-5-carboxyphenoxy]-4-chloro-3-[N,N-dimethylhydrazino]-2-oxo-1(2H)-pyridinyl]]acetamide;
- 20       N-[[4-aminoiminomethylphenyl]methyl]-2-[1-[6-[3,5-diaminophenoxy]-3-[N-ethyl-N-methylhydrazino]-4-fluoro-2-oxo-1(4H)-pyridinyl]]acetamide;
- N-[[4-aminoiminomethylphenyl]methyl]-2-[1-[6-[3,5-diaminophenoxy]-3-[N,N-diethylhydrazino]-2-oxo-1(4H)-pyridinyl]]acetamide;
- 25       N-[[4-aminoiminomethylphenyl]methyl]-4-chloro-2-[1-[6-[3,5-diaminophenylthio]-3-[N,N-dimethylhydrazino]-2-oxo-1(2H)-pyridinyl]]acetamide;
- N-[[4-aminoiminomethylphenyl]methyl]-2-[1-[6-[3-amino-5-carboxyphenylthio]-3-[N,N-dimethylhydrazino]-2-oxo-1(2H)-pyridinyl]]acetamide;
- 30       N-[[4-aminoiminomethylphenyl]methyl]-2-[1-[6-[3-amino-5-carboxyphenylthio]-3-[N,N-dimethylhydrazino]-4-fluoro-2-oxo-1(2H)-pyridinyl]]acetamide;

N-[[4-aminoiminomethylphenyl]methyl]-2-[1-[6-[3-aminophenyl]-4-chloro-3-[N,N-dimethylhydrazino]-2-oxo-1(2H)-pyridinyl]]acetamide;

N-[[4-aminoiminomethylphenyl]methyl]-2-[1-[6-[3-aminophenyl]-3-[N-ethyl-N-methylhydrazino]-4-fluoro-2-oxo-1(4H)-pyridinyl]]acetamide;

5 N-[[4-aminoiminomethylphenyl]methyl]-2-[1-[6-[3-aminophenyl]-3-[N,N-diethylhydrazino]-2-oxo-1(4H)-pyridinyl]]acetamide;

N-[[4-aminoiminomethylphenyl]methyl]-4-chloro-2-[1-[6-[3,5-diaminophenyl]-3-[N,N-dimethylhydrazino]-2-oxo-1(2H)-pyridinyl]]acetamide;

10 N-[[4-aminoiminomethylphenyl]methyl]-2-[1-[6-[3-aminophenyl]-3-[N,N-dimethylhydrazino]-2-oxo-1(2H)-pyridinyl]]acetamide;

N-[[4-aminoiminomethylphenyl]methyl]-2-[1-[6-[3-aminophenyl]-3-[N,N-dimethylhydrazino]-4-fluoro-2-oxo-1(2H)-pyridinyl]]acetamide;

-- N-[[4-aminoiminomethylphenyl]methyl]-2-[1-[6-[3-amino-5-  
15 carboxyphenyl]-4-chloro-3-[N,N-dimethylhydrazino]-2-oxo-1(2H)-pyridinyl]]acetamide;

N-[[4-aminoiminomethylphenyl]methyl]-2-[1-[6-[3,5-diaminophenyl]-3-[N-ethyl-N-methylhydrazino]-4-fluoro-2-oxo-1(4H)-pyridinyl]]acetamide;

20 N-[[4-aminoiminomethylphenyl]methyl]-2-[1-[6-[3,5-diaminophenyl]-3-[N,N-diethylhydrazino]-2-oxo-1(4H)-pyridinyl]]acetamide;

N-[[4-aminoiminomethylphenyl]methyl]-4-chloro-2-[1-[6-[3,5-diaminophenyl]-3-[N,N-dimethylhydrazino]-2-oxo-1(2H)-pyridinyl]]acetamide;

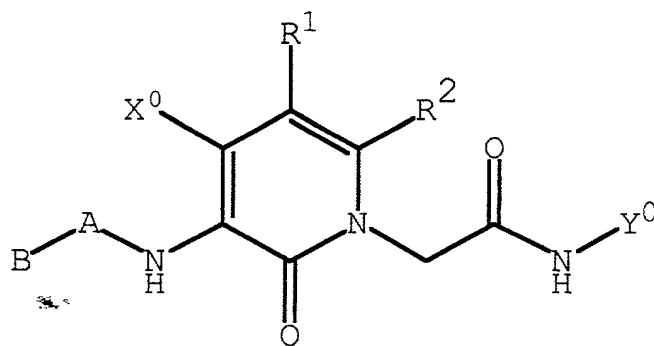
25 N-[[4-aminoiminomethylphenyl]methyl]-2-[1-[6-[3-amino-5-carboxyphenyl]-3-[N,N-dimethylhydrazino]-2-oxo-1(2H)-pyridinyl]]acetamide;

N-[[4-aminoiminomethylphenyl]methyl]-2-[1-[6-[3-amino-5-carboxyphenyl]-3-[N,N-dimethylhydrazino]-4-fluoro-2-oxo-1(2H)-pyridinyl]]acetamide.

30

Using the examples and methods described herein previously, the following further examples having a amidinoaralkyl or amidinoheteroaralkyl type Y<sup>o</sup> group could be prepared of the formula:





wherein;

- $R^2$  is 3-aminophenoxy, B is 3-chlorophenyl, A is  $\text{CH}_2\text{CH}_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^0$  is hydrido;
- 5  $R^2$  is 3-aminophenoxy, B is phenyl, A is  $\text{CH}_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^0$  is hydrido;
- $R^2$  is phenylthio, B is 3-chlorophenyl, A is  $\text{CH}_2\text{CH}_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^0$  is hydrido;
- 10  $R^2$  is 3-amino-4-carboxy-2-thienyl, B is phenyl, A is  $\text{CH}_2\text{CH}_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^0$  is hydrido;
- $R^2$  is 3,4-diamino-2-thienyl, B is phenyl, A is  $\text{CH}_2\text{CH}_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^0$  is hydrido;
- $R^2$  is phenoxy, B is 3-aminophenyl, A is  $\text{C}(\text{O})\text{NH}$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^0$  is hydrido;
- 15  $R^2$  is phenoxy, B is 3-amidinophenyl, A is  $\text{CH}_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^0$  is hydrido;
- $R^2$  is 3-(N-methylamino)-2-thienyl, B is phenyl, A is  $\text{CH}_2\text{CH}_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^0$  is hydrido;
- 20  $R^2$  is 3-methylsulfonamido-2-thienyl, B is phenyl, A is  $\text{CH}_2\text{CH}_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^0$  is hydrido;

$R^2$  is phenylthio, B is 4-amidinophenyl, A is  $CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-methylaminophenoxy, B is phenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

5  $R^2$  is 3-aminophenylthio, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenylamino, B is phenyl, A is  $CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is amino, and  $X^O$  is hydrido;

$R^2$  is 3-amino-2-thienyl, B is phenyl, A is  $CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is amino, and  $X^O$  is hydrido;

$R^2$  is phenylthio, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is amino, and  $X^O$  is hydrido;

15  $R^2$  is 3-aminophenoxy, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 3-amino-2-thienyl, B is phenyl, A is  $CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 3-amidocarbonyl-5-aminophenoxy, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-benzylamidocarbonyl)phenoxy, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidocarbonyl)phenoxy, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidosulfonyl)phenoxy, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-trifluoromethylbenzyl)amidocarbonyl)phenoxy, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3,5-diaminophenoxy, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxy-2-thienyl, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amidocarbonyl-5-aminophenylthio, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-benzylamidocarbonyl)-2-thienyl, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidocarbonyl)-2-thienyl, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidosulfonyl)-2-thienyl, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-trifluoromethylbenzyl)amidocarbonyl)-2-thienyl, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3,5-diaminophenylamino, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxyphenylamino, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

- $R^2$  is 3-aminophenoxy, B is 2,2,2-trifluoroethyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;
- $R^2$  is 3-aminophenoxy, B is (S)-2-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;
- 5  $R^2$  is 5-amino-2-fluorophenoxy, B is isopropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;
- $R^2$  is 2-methyl-3-aminophenoxy, B is isopropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;
- $R^2$  is 3-aminophenoxy, B is ethyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;
- 10  $R^2$  is 3-aminophenoxy, B is ethyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;
- $R^2$  is 3-aminophenoxy, B is 2-propenyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;
- 15  $R^2$  is 3-aminophenoxy, B is isopropyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;
- $R^2$  is 3-aminophenoxy, B is isopropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;
- $R^2$  is 3-aminophenoxy, B is 2-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;
- 20  $R^2$  is 3-aminophenoxy, B is (R)-2-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;
- $R^2$  is 3-aminophenoxy, B is 2-propynyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;
- 25  $R^2$  is 3-aminophenoxy, B is 3-pentyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is hydrido, A is  $CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is ethyl, A is  $CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

5  $R^2$  is 3-aminophenoxy, B is 2-methylpropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is 2-propyl, A is  $CH_3CH$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is propyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is 6-amidocarbonylhexyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is tert-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

15  $R^2$  is 3-aminophenoxy, B is tert-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is 3-hydroxypropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is 2-methylpropyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is 1-methoxy-2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

25  $R^2$  is 3-aminophenoxy, B is 2-methoxyethyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is 2-propyl, A is single bond,  $Y^0$  is 5-amidino-2-thienylmethyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidino-3-fluorobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

5  $R^2$  is 3-carboxyphenoxy, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidino-3-fluorobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

10  $R^2$  is 3-amino-5-carboxy-2-thienyl, B is 2,2,2-trifluoroethyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxy-2-thienyl, B is (S)-2-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 5-amino-4-fluoro-3-carboxy-2-thienyl, B is isopropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

15  $R^2$  is 4-methyl-3-amino-5-carboxy-2-thienyl, B is isopropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxy-2-thienyl, B is ethyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

20  $R^2$  is 3-amino-5-carboxy-2-thienyl, B is ethyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxy-2-thienyl, B is 2-propenyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxy-2-thienyl, B is isopropyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

25  $R^2$  is 3-amino-5-carboxy-2-thienyl, B is isopropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxy-2-thienyl, B is 2-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxy-2-thienyl, B is (R)-2-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

5  $R^2$  is 3-amino-5-carboxy-2-thienyl, B is 2-propynyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxy-2-thienyl, B is 3-pentyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

10  $R^2$  is 3-amino-5-carboxy-2-thienyl, B is hydrido, A is  $CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxy-2-thienyl, B is ethyl, A is  $CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxy-2-thienyl, B is 2-methypropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

15  $R^2$  is 3-amino-5-carboxy-2-thienyl, B is 2-propyl, A is  $CH_3CH$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxy-2-thienyl, B is propyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

20  $R^2$  is 3-amino-5-carboxy-2-thienyl, B is 6-amidocarbonylhexyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxy-2-thienyl, B is tert-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxy-2-thienyl, B is tert-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

25  $R^2$  is 3-amino-5-carboxy-2-thienyl, B is 3-hydroxypropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxy-2-thienyl, B is 2-methylpropyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxy-2-thienyl, B is butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

5  $R^2$  is 3-amino-5-carboxy-2-thienyl, B is 1-methoxy-2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxy-2-thienyl, B is 2-methoxyethyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

10  $R^2$  is 3-amino-5-carboxy-2-thienyl, B is 2-propyl, A is single bond,  $Y^0$  is 5-amidino-2-thienylmethyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxy-2-thienyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidino-3-fluorobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-carboxy-5-carboxy-2-thienyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

15  $R^2$  is 3-amino-5-carboxy-2-thienyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidino-3-fluorobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxyphenylthio, B is 2,2,2-trifluoroethyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

20  $R^2$  is 3-amino-5-carboxyphenylthio, B is (S)-2-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 5-amino-2-fluoro-5-carboxyphenylthio, B is isopropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 2-methyl-3-amino-5-carboxyphenylthio, B is isopropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

25  $R^2$  is 3-amino-5-carboxyphenylthio, B is ethyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;



$R^2$  is 3-amino-5-carboxyphenylthio, B is ethyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxyphenylthio, B is 2-propenyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

5  $R^2$  is 3-amino-5-carboxyphenylthio, B is isopropyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxyphenylthio, B is isopropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

10  $R^2$  is 3-amino-5-carboxyphenylthio, B is 2-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxyphenylthio, B is (R)-2-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxyphenylthio, B is 2-propynyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

15  $R^2$  is 3-amino-5-carboxyphenylthio, B is 3-pentyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxyphenylthio, B is hydrido, A is  $CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

20  $R^2$  is 3-amino-5-carboxyphenylthio, B is ethyl, A is  $CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxyphenylthio, B is 2-methypropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxyphenylthio, B is 2-propyl, A is  $CH_3CH$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

25  $R^2$  is 3-amino-5-carboxyphenylthio, B is propyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxyphenylthio, B is 6-amidocarbonylhexyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxyphenylthio, B is tert-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

5  $R^2$  is 3-amino-5-carboxyphenylthio, B is tert-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxyphenylthio, B is 3-hydroxypropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

10  $R^2$  is 3-amino-5-carboxyphenylthio, B is 2-methylpropyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxyphenylthio, B is butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxyphenylthio, B is 1-methoxy-2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

15  $R^2$  is 3-amino-5-carboxyphenylthio, B is 2-methoxyethyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxyphenylthio, B is 2-propyl, A is single bond,  $Y^0$  is 5-amidino-2-thienylmethyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

20  $R^2$  is 3-amino-5-carboxyphenylthio, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidino-3-fluorobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-carboxy-5-carboxyphenylthio, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxyphenylthio, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidino-3-fluorobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

25  $R^2$  is 3-amidocarbonyl-5-aminophenoxy, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-benzylamidocarbonyl)phenoxy, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidocarbonyl)phenoxy, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

5  $R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidosulfonyl)phenoxy, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-trifluoromethylbenzyl)amidocarbonyl)- phenoxy, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

10  $R^2$  is 3,5-diaminophenoxy, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxyphenoxy, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

15  $R^2$  is 3-amidocarbonyl-5-aminophenoxy, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-benzylamidocarbonyl)phenoxy, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidocarbonyl)phenoxy, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

20  $R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidosulfonyl)phenoxy B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-trifluoromethylbenzyl)amidocarbonyl)phenoxy, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

25  $R^2$  is 3,5-diaminophenoxy, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxyphenoxy, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amidocarbonyl-5-amino-2-thienyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

5  $R^2$  is 3-amino-5-(N-benzylamidocarbonyl)-2-thienyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidocarbonyl)-2-thienyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

10  $R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidosulfonyl)-2-thienyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-trifluoromethylbenzyl)amidocarbonyl)-2-thienyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

15  $R^2$  is 3,5-diamino-2-thienyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxy-2-thienyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amidocarbonyl-5-amino-2-thienyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

20  $R^2$  is 3-amino-5-(N-benzylamidocarbonyl)-2-thienyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidocarbonyl)-2-thienyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

25  $R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidosulfonyl)-2-thienyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-trifluoromethylbenzyl)amidocarbonyl)-2-thienyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

5  $R^2$  is 3,5-diamino-2-thienyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxy-2-thienyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amidocarbonyl-5-aminophenylthio, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

10  $R^2$  is 3-amino-5-(N-benzylamidocarbonyl)phenylthio, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidocarbonyl)phenylthio, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

15  $R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidosulfonyl)phenylthio, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-trifluoromethylbenzyl)amidocarbonyl)phenylthio, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

20  $R^2$  is 3,5-diaminophenylthio, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxyphenylthio, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amidocarbonyl-5-aminophenylthio, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

25  $R^2$  is 3-amino-5-(N-benzylamidocarbonyl)phenylthio, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidocarbonyl)phenylthio, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidodisulfonyl)phenylthio B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl  $R^1$  is hydrido, and  $X^O$  is hydrido;

5  $R^2$  is 3-amino-5-(N-(2-trifluoromethylbenzyl)amidocarbonyl)phenylthio, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3,5-diaminophenylthio, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

10  $R^2$  is 3-amino-5-carboxyphenylthio, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is cyclopropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

15  $R^2$  is 3-aminophenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is cyclopropyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

20  $R^2$  is 3-aminophenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidino-3-fluorobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

25  $R^2$  is 3-aminophenoxy, B is cyclopentyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

- $R^2$  is 3-aminophenoxy, B is cyclopropyl, A is  $CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;
- $R^2$  is 3-aminophenoxy, B is 2-(2R)-bicyclo[2.2.1]-heptyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;
- 5  $R^2$  is 3-aminophenoxy, B is cyclopentyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;
- $R^2$  is 3-aminophenoxy, B is cyclohexyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;
- $R^2$  is 2-hydroxyphenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;
- 10  $R^2$  is phenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;
- $R^2$  is 2,6-dichlorophenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;
- 15  $R^2$  is 3-aminophenoxy, B is cyclopropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;
- $R^2$  is 3-aminophenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;
- $R^2$  is 3-aminophenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;
- 20  $R^2$  is 3-aminophenoxy, B is cyclopropyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;
- $R^2$  is 3-aminophenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;
- 25  $R^2$  is 3-aminophenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidino-3-fluorobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is cyclopentyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is cyclopropyl, A is  $CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

5  $R^2$  is 3-aminophenoxy, B is 2-(2R)-bicyclo[2.2.1]-heptyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is cyclopentyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

10  $R^2$  is 3-aminophenoxy, B is cyclohexyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 2-hydroxyphenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is phenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

15  $R^2$  is 2,6-dichlorophenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amidocarbonyl-5-aminophenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

20  $R^2$  is 3-amino-5-(N-benzylamidocarbonyl)phenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidocarbonyl)phenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

25  $R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidosulfonyl)phenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;



$R^2$  is 3-amino-5-(N-(2-trifluoromethylbenzyl)amidocarbonyl)-phenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

- 5  $R^2$  is 3,5-diaminophenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxyphenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amidocarbonyl-5-aminophenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

- 10  $R^2$  is 3-amino-5-(N-benzylamidocarbonyl)phenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidocarbonyl)phenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

- 15  $R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidosulfonyl)phenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-trifluoromethylbenzyl)amidocarbonyl)phenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

- 20  $R^2$  is 3,5-diaminophenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxyphenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

- 25  $R^2$  is 3-amidocarbonyl-5-aminophenylthio, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-benzylamidocarbonyl)phenylthio, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidocarbonyl)phenylthio, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidosulfonyl)phenylthio, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-trifluoromethylbenzyl)amidocarbonyl)phenylthio, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3,5-diaminophenylthio, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxyphenylthio, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amidocarbonyl-5-aminophenylthio, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-benzylamidocarbonyl)phenylthio, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidocarbonyl)phenylthio, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidosulfonyl)phenylthio, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-trifluoromethylbenzyl)amidocarbonyl)phenylthio, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

- 5  $R^2$  is 3,5-diaminophenylthio, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxyphenylthio, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amidocarbonyl-5-amino-2-thienyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

- 10  $R^2$  is 3-amino-5-(N-benzylamidocarbonyl)-2-thienyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidocarbonyl)-2-thienyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

- 15  $R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidosulfonyl)-2-thienyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-trifluoromethylbenzyl)amidocarbonyl)-2-thienyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

- 20  $R^2$  is 3,5-diamino-2-thienyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxy-2-thienyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

- 25  $R^2$  is 3-amidocarbonyl-5-amino-2-thienyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-benzylamidocarbonyl)-2-thienyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidocarbonyl)-2-thienyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidosulfonyl)-2-thienyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-trifluoromethylbenzyl)amidocarbonyl)-2-thienyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3,5-diamino-2-thienyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxy-2-thienyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is phenyl, A is  $CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is phenyl, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-dimethylaminophenyl, B is phenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 2-methylphenyl, B is phenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is phenyl, B is 3-aminophenyl, A is C(O)NH,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amidocarbonyl-5-aminophenyl, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

5  $R^2$  is 3-amino-5-(N-benzylamidocarbonyl)phenyl, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidocarbonyl)phenyl, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

10  $R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidosulfonyl)phenyl, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-trifluoromethylbenzyl)amidocarbonyl)-phenyl, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

15  $R^2$  is 3,5-diaminophenyl, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxyphenyl, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

20  $R^2$  is 3-amidocarbonyl-5-aminophenyl, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-benzylamidocarbonyl)phenyl, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

25  $R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidocarbonyl)phenyl, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidosulfonyl)phenyl, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

5  $R^2$  is 3-amino-5-(N-(2-trifluoromethylbenzyl)amidocarbonyl)-phenyl, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3,5-diaminophenyl, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

10  $R^2$  is 3-amino-5-carboxyphenyl, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is 2,2,2-trifluoroethyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is (S)-2-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

15  $R^2$  is 5-amino-2-fluorophenyl, B is isopropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 2-methyl-3-aminophenyl, B is isopropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

20  $R^2$  is 3-aminophenyl, B is ethyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is ethyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is 2-propenyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

25  $R^2$  is 3-aminophenyl, B is isopropyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

- $R^2$  is 3-aminophenyl, B is isopropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;
- $R^2$  is 3-aminophenyl, B is 2-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;
- 5  $R^2$  is 3-aminophenyl, B is (R)-2-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;
- $R^2$  is 3-aminophenyl, B is 2-propynyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;
- $R^2$  is 3-aminophenyl, B is 3-pentyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;
- 10  $R^2$  is 3-aminophenyl, B is hydrido, A is  $CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;
- $R^2$  is 3-aminophenyl, B is ethyl, A is  $CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;
- 15  $R^2$  is 3-aminophenyl, B is 2-methypropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;
- $R^2$  is 3-aminophenyl, B is 2-propyl, A is  $CH_3CH$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;
- $R^2$  is 3-aminophenyl, B is propyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;
- 20  $R^2$  is 3-aminophenyl, B is 6-amidocarbonylhexyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;
- $R^2$  is 3-aminophenyl, B is tert-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;
- 25  $R^2$  is 3-aminophenyl, B is tert-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is 3-hydroxypropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is 2-methylpropyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

5  $R^2$  is 3-aminophenyl, B is butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is 1-methoxy-2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

10  $R^2$  is 3-aminophenyl, B is 1-methoxy-2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is 2-methoxyethyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is 2-propyl, A is single bond,  $Y^0$  is 5-amidino-2-thienylmethyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

15  $R^2$  is 3-aminophenyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidino-3-fluorobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-carboxyphenyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

20  $R^2$  is 3-aminophenyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidino-3-fluorobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is 2,2,2-trifluoroethyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is (S)-2-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

25  $R^2$  is 5-amino-2-fluorophenyl, B is isopropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;



$R^2$  is 2-methyl-3-aminophenyl, B is isopropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is ethyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

5  $R^2$  is 3-aminophenyl, B is ethyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is 2-propenyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

10  $R^2$  is 3-aminophenyl, B is isopropyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is isopropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is 2-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

15  $R^2$  is 3-aminophenyl, B is (R)-2-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is 2-propynyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

20  $R^2$  is 3-aminophenyl, B is 3-pentyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is hydrido, A is  $CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is ethyl, A is  $CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

25  $R^2$  is 3-aminophenyl, B is 2-methypropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

- $R^2$  is 3-aminophenyl, B is 2-propyl, A is  $\text{CH}_3\text{CH}$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^0$  is hydrido;
- $R^2$  is 3-aminophenyl, B is propyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is aminomethyl, and  $X^0$  is hydrido;
- 5  $R^2$  is 3-aminophenyl, B is 6-amidocarbonylhexyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^0$  is hydrido;
- $R^2$  is 3-aminophenyl, B is tert-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^0$  is hydrido;
- $R^2$  is 3-aminophenyl, B is tert-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^0$  is hydrido;
- 10  $R^2$  is 3-aminophenyl, B is 3-hydroxypropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^0$  is hydrido;
- $R^2$  is 3-aminophenyl, B is 2-methylpropyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is aminomethyl, and  $X^0$  is hydrido;
- 15  $R^2$  is 3-aminophenyl, B is butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^0$  is hydrido;
- $R^2$  is 3-aminophenyl, B is 1-methoxy-2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^0$  is hydrido;
- $R^2$  is 3-aminophenyl, B is 1-methoxy-2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^0$  is hydrido;
- 20  $R^2$  is 3-aminophenyl, B is 2-methoxyethyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^0$  is hydrido;
- $R^2$  is 3-aminophenyl, B is 2-propyl, A is single bond,  $Y^0$  is 5-amidino-2-thienylmethyl,  $R^1$  is aminomethyl, and  $X^0$  is hydrido;
- 25  $R^2$  is 3-aminophenyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidino-3-fluorobenzyl,  $R^1$  is aminomethyl, and  $X^0$  is hydrido;

$R^2$  is 3-carboxyphenyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidino-3-fluorobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

5  $R^2$  is 3-amidocarbonyl-5-aminophenyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-benzylamidocarbonyl)phenyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

10  $R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidocarbonyl)phenyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidosulfonyl)phenyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-trifluoromethylbenzyl)amidocarbonyl)-phenyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

15  $R^2$  is 3,5-diaminophenyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxyphenyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

20  $R^2$  is 3-amidocarbonyl-5-aminophenyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-benzylamidocarbonyl)phenyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidocarbonyl)phenyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

25  $R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidosulfonyl)phenyl B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-trifluoromethylbenzyl)amidocarbonyl)-phenyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

- $R^2$  is 3-amino-5-carboxyphenyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is cyclopropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

- 10  $R^2$  is 3-aminophenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is cyclopropyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

- 15  $R^2$  is 3-aminophenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidino-3-fluorobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is cyclopentyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

- 20  $R^2$  is 5-amino-2-thienyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is cyclopropyl, A is  $CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

- 25  $R^2$  is 3-aminophenyl, B is 2-(2R)-bicyclo[2.2.1]-heptyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

- $R^2$  is 3-aminophenyl, B is cyclopentyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;
- $R^2$  is 3-aminophenyl, B is cyclohexyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;
- 5  $R^2$  is 2-hydroxyphenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;
- $R^2$  is phenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;
- $R^2$  is 3-thienyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;
- 10  $R^2$  is 2,6-dichlorophenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;
- $R^2$  is 3-aminophenyl, B is cyclopropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydroxymethyl, and  $X^O$  is hydrido;
- 15  $R^2$  is 3-aminophenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is hydroxymethyl, and  $X^O$  is hydrido;
- $R^2$  is 3-aminophenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydroxymethyl, and  $X^O$  is hydrido;
- $R^2$  is 3-aminophenyl, B is cyclopropyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is hydroxymethyl, and  $X^O$  is hydrido;
- 20  $R^2$  is 3-aminophenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydroxymethyl, and  $X^O$  is hydrido;
- $R^2$  is 3-aminophenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidino-3-fluorobenzyl,  $R^1$  is hydroxymethyl, and  $X^O$  is hydrido;
- 25  $R^2$  is 3-aminophenyl, B is cyclopentyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydroxymethyl, and  $X^O$  is hydrido;

- $R^2$  is 5-amino-2-thienyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydroxymethyl, and  $X^O$  is hydrido;
- $R^2$  is 3-aminophenyl, B is cyclopropyl, A is  $CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydroxymethyl, and  $X^O$  is hydrido;
- 5  $R^2$  is 3-aminophenyl, B is 2-(2R)-bicyclo[2.2.1]-heptyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydroxymethyl, and  $X^O$  is hydrido;
- $R^2$  is 3-aminophenyl, B is cyclopentyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is hydroxymethyl, and  $X^O$  is hydrido;
- $R^2$  is 3-aminophenyl, B is cyclohexyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydroxymethyl, and  $X^O$  is hydrido;
- 10  $R^2$  is 2-hydroxyphenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydroxymethyl, and  $X^O$  is hydrido;
- $R^2$  is phenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydroxymethyl, and  $X^O$  is hydrido;
- 15  $R^2$  is 3-thienyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydroxymethyl, and  $X^O$  is hydrido;
- $R^2$  is 2,6-dichlorophenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydroxymethyl, and  $X^O$  is hydrido;
- $R^2$  is 3-amidocarbonyl-5-aminophenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;
- 20  $R^2$  is 3-amino-5-(N-benzylamidocarbonyl)phenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;
- $R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidocarbonyl)phenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;
- 25 hydrido;

$R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidosulfonyl)phenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-trifluoromethylbenzyl)amidocarbonyl)- phenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3,5-diaminophenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxyphenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amidocarbonyl-5-aminophenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-benzylamidocarbonyl)phenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidocarbonyl)phenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

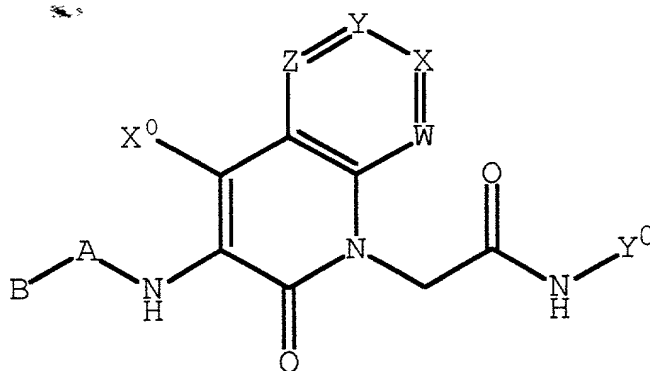
$R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidosulfonyl)phenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-trifluoromethylbenzyl)amidocarbonyl)- phenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3,5-diaminophenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxyphenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido.

- Using the examples and methods described herein previously, the following further examples having  $R^1$  and  $R^2$  bonded together to form  $-W=X-Y=Z-$  and an amidinoaralkyl or amidinoheteroaralkyl type  $Y^0$  group could be prepared of the
- 5 formula:



wherein;

- B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl, W is CH, X is
- 10 C-NH<sub>2</sub>, Y is C-CH<sub>2</sub>CO<sub>2</sub>H, Z is CH, and  $X^0$  is hydrido;
- B is phenyl, A is  $CH_2$ ,  $Y^0$  is 4-amidinobenzyl, W is N, X is C-CH<sub>2</sub>NH<sub>2</sub>, Y is C-CO<sub>2</sub>H, Z is CH, and  $X^0$  is hydrido;
- B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl, W is C-OH, X is C-CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>, Y is C-OH, Z is CH, and  $X^0$  is hydrido;
- 15 B is 2-imidazolyl, A is  $CH_2CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl, W is C-NH<sub>2</sub>, X is C-CH<sub>2</sub>OH, Y is C-NH<sub>2</sub>, Z is CH, and  $X^0$  is hydrido;
- B is 2,2,2-trifluoroethyl, A is single bond,  $Y^0$  is 4-amidinobenzyl, W is CH, X is C-NH<sub>2</sub>, Y is C-CH<sub>2</sub>CO<sub>2</sub>H, Z is CH, and  $X^0$  is hydrido;
- B is (S)-2-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl, W is N, X is C-
- 20 CH<sub>2</sub>NH<sub>2</sub>, Y is C-CO<sub>2</sub>H, Z is CH, and  $X^0$  is hydrido;



B is isopropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl, W is C-OH, X is C-CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>, Y is C-OH, Z is CH, and  $X^O$  is hydrido;

B is isopropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl, W is C-NH<sub>2</sub>, X is C-CH<sub>2</sub>OH, Y is C-NH<sub>2</sub>, Z is CH, and  $X^O$  is hydrido;

5 B is hydrido, A is CH<sub>2</sub>(CH<sub>3</sub>)N,  $Y^0$  is 4-amidinobenzyl, W is CH, X is C-NH<sub>2</sub>, Y is C-CH<sub>2</sub>CO<sub>2</sub>H, Z is CH, and  $X^O$  is hydrido;

B is ethyl, A is single bond,  $Y^0$  is 4-amidinobenzyl, W is N, X is C-CH<sub>2</sub>NH<sub>2</sub>, Y is C-CO<sub>2</sub>H, Z is CH, and  $X^O$  is hydrido;

10 B is ethyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl, W is C-OH, X is C-CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>, Y is C-OH, Z is CH, and  $X^O$  is hydrido;

B is 2-propenyl, A is single bond,  $Y^0$  is 4-amidinobenzyl, W is C-NH<sub>2</sub>, X is C-CH<sub>2</sub>OH, Y is C-NH<sub>2</sub>, Z is CH, and  $X^O$  is hydrido;

B is isopropyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl, W is CH, X is C-NH<sub>2</sub>, Y is C-CH<sub>2</sub>CO<sub>2</sub>H, Z is CH, and  $X^O$  is hydrido;

15 B is isopropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl, W is N, X is C-CH<sub>2</sub>NH<sub>2</sub>, Y is C-CO<sub>2</sub>H, Z is CH, and  $X^O$  is hydrido;

B is 2-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl, W is C-OH, X is C-CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>, Y is C-OH, Z is CH, and  $X^O$  is hydrido;

20 B is (R)-2-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl, W is C-NH<sub>2</sub>, X is C-CH<sub>2</sub>OH, Y is C-NH<sub>2</sub>, Z is CH, and  $X^O$  is hydrido;

B is 2-propynyl, A is single bond,  $Y^0$  is 4-amidinobenzyl, W is CH, X is C-NH<sub>2</sub>, Y is C-CH<sub>2</sub>CO<sub>2</sub>H, Z is CH, and  $X^O$  is hydrido;

B is hydrido, A is CH<sub>2</sub>,  $Y^0$  is 4-amidinobenzyl, W is N, X is C-CH<sub>2</sub>NH<sub>2</sub>, Y is C-CO<sub>2</sub>H, Z is CH, and  $X^O$  is hydrido;

B is cyclopropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl, W is C-OH, X is C-CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>, Y is C-OH, Z is CH, and  $X^O$  is hydrido;

B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl, W is C-NH<sub>2</sub>, X is C-CH<sub>2</sub>OH, Y is C-NH<sub>2</sub>, Z is CH, and  $X^O$  is hydrido;

- 5 B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl, W is CH, X is C-NH<sub>2</sub>, Y is C-CH<sub>2</sub>CO<sub>2</sub>H, Z is CH, and  $X^O$  is hydrido;

B is cyclopropyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl, W is N, X is C-CH<sub>2</sub>NH<sub>2</sub>, Y is C-CO<sub>2</sub>H, Z is CH, and  $X^O$  is hydrido;

- 10 B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl, W is C-OH, X is C-CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>, Y is C-OH, Z is CH, and  $X^O$  is hydrido;

B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidino-3-fluorobenzyl, W is C-NH<sub>2</sub>, X is C-CH<sub>2</sub>OH, Y is C-NH<sub>2</sub>, Z is CH, and  $X^O$  is hydrido;

B is cyclopentyl, A is single bond,  $Y^0$  is 4-amidinobenzyl, W is CH, X is C-NH<sub>2</sub>, Y is C-CH<sub>2</sub>CO<sub>2</sub>H, Z is CH, and  $X^O$  is hydrido;

- 15 B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl, W is N, X is C-CH<sub>2</sub>NH<sub>2</sub>, Y is C-CO<sub>2</sub>H, Z is CH, and  $X^O$  is hydrido;

B is cyclopropyl, A is CH<sub>2</sub>,  $Y^0$  is 4-amidinobenzyl, W is C-OH, X is C-CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>, Y is C-OH, Z is CH, and  $X^O$  is hydrido;

- 20 B is 2-(2R)-bicyclo[2.2.1]-heptyl, A is single bond,  $Y^0$  is 4-amidinobenzyl, W is C-NH<sub>2</sub>, X is C-CH<sub>2</sub>OH, Y is C-NH<sub>2</sub>, Z is CH, and  $X^O$  is hydrido;

B is cyclopentyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl, W is CH, X is C-NH<sub>2</sub>, Y is C-CH<sub>2</sub>CO<sub>2</sub>H, Z is CH, and  $X^O$  is hydrido;

B is cyclohexyl, A is CH<sub>2</sub>CH<sub>2</sub>,  $Y^0$  is 4-amidinobenzyl, W is N, X is C-CH<sub>2</sub>NH<sub>2</sub>, Y is C-CO<sub>2</sub>H, Z is CH, and  $X^O$  is hydrido;

B is 3-chlorophenyl, A is  $\text{CH}_2\text{CH}_2$ ,  $\text{Y}^0$  is 4-amidinobenzyl, W is C-OH, X is C- $\text{CH}_2\text{CH}_2\text{NH}_2$ , Y is C-OH, Z is CH, and  $\text{X}^\circ$  is hydrido;

B is phenyl, A is  $\text{CH}_2$ ,  $\text{Y}^0$  is 4-amidinobenzyl, W is C- $\text{NH}_2$ , X is C- $\text{CH}_2\text{OH}$ , Y is C- $\text{NH}_2$ , Z is CH, and  $\text{X}^\circ$  is hydrido;

5 B is 3-chlorophenyl, A is  $\text{CH}_2\text{CH}_2$ ,  $\text{Y}^0$  is 4-amidinobenzyl, W is CH, X is C- $\text{NH}_2$ , Y is C- $\text{CH}_2\text{CO}_2\text{H}$ , Z is CH, and  $\text{X}^\circ$  is hydrido;

B is 2-imidazolyl, A is  $\text{CH}_2\text{CH}_2\text{CH}_2$ ,  $\text{Y}^0$  is 4-amidinobenzyl, W is N, X is C- $\text{CH}_2\text{NH}_2$ , Y is C- $\text{CO}_2\text{H}$ , Z is CH, and  $\text{X}^\circ$  is hydrido;

10 B is 2,2,2-trifluoroethyl, A is single bond,  $\text{Y}^0$  is 4-amidinobenzyl, W is C-OH, X is C- $\text{CH}_2\text{CH}_2\text{NH}_2$ , Y is C-OH, Z is CH, and  $\text{X}^\circ$  is hydrido;

B is (S)-2-butyl, A is single bond,  $\text{Y}^0$  is 4-amidinobenzyl, W is C- $\text{NH}_2$ , X is C- $\text{CH}_2\text{OH}$ , Y is C- $\text{NH}_2$ , Z is CH, and  $\text{X}^\circ$  is hydrido;

B is isopropyl, A is single bond,  $\text{Y}^0$  is 4-amidinobenzyl, W is CH, X is C- $\text{NH}_2$ , Y is C- $\text{CH}_2\text{CO}_2\text{H}$ , Z is CH, and  $\text{X}^\circ$  is hydrido;

15 B is isopropyl, A is single bond,  $\text{Y}^0$  is 4-amidinobenzyl, W is N, X is C- $\text{CH}_2\text{NH}_2$ , Y is C- $\text{CO}_2\text{H}$ , Z is CH, and  $\text{X}^\circ$  is hydrido;

B is hydrido, A is  $\text{CH}_2(\text{CH}_3)\text{N}$ ,  $\text{Y}^0$  is 4-amidinobenzyl, W is C-OH, X is C- $\text{CH}_2\text{CH}_2\text{NH}_2$ , Y is C-OH, Z is CH, and  $\text{X}^\circ$  is hydrido;

20 B is ethyl, A is single bond,  $\text{Y}^0$  is 4-amidinobenzyl, W is C- $\text{NH}_2$ , X is C- $\text{CH}_2\text{OH}$ , Y is C- $\text{NH}_2$ , Z is CH, and  $\text{X}^\circ$  is hydrido;

B is ethyl, A is single bond,  $\text{Y}^0$  is 4-amidino-2-fluorobenzyl, W is CH, X is C- $\text{NH}_2$ , Y is C- $\text{CH}_2\text{CO}_2\text{H}$ , Z is CH, and  $\text{X}^\circ$  is hydrido;

B is 2-propenyl, A is single bond,  $\text{Y}^0$  is 4-amidinobenzyl, W is N, X is C- $\text{CH}_2\text{NH}_2$ , Y is C- $\text{CO}_2\text{H}$ , Z is CH, and  $\text{X}^\circ$  is hydrido;

B is isopropyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl, W is C-OH, X is C-CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>, Y is C-OH, Z is CH, and  $X^0$  is hydrido;

B is isopropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl, W is C-NH<sub>2</sub>, X is C-CH<sub>2</sub>OH, Y is C-NH<sub>2</sub>, Z is CH, and  $X^0$  is hydrido;

5 B is 2-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl, W is CH, X is C-NH<sub>2</sub>, Y is C-CH<sub>2</sub>CO<sub>2</sub>H, Z is CH, and  $X^0$  is hydrido;

B is (R)-2-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl, W is N, X is C-CH<sub>2</sub>NH<sub>2</sub>, Y is C-CO<sub>2</sub>H, Z is CH, and  $X^0$  is hydrido;

10 B is 2-propynyl, A is single bond,  $Y^0$  is 4-amidinobenzyl, W is C-OH, X is C-CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>, Y is C-OH, Z is CH, and  $X^0$  is hydrido;

B is hydrido, A is CH<sub>2</sub>,  $Y^0$  is 4-amidinobenzyl, W is C-NH<sub>2</sub>, X is C-CH<sub>2</sub>OH, Y is C-NH<sub>2</sub>, Z is CH, and  $X^0$  is hydrido;

B is cyclopropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl, W is CH, X is C-NH<sub>2</sub>, Y is C-CH<sub>2</sub>CO<sub>2</sub>H, Z is CH, and  $X^0$  is hydrido;

15 B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl, W is N, X is C-CH<sub>2</sub>NH<sub>2</sub>, Y is C-CO<sub>2</sub>H, Z is CH, and  $X^0$  is hydrido;

B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl, W is C-OH, X is C-CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>, Y is C-OH, Z is CH, and  $X^0$  is hydrido;

20 B is cyclopropyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl, W is C-NH<sub>2</sub>, X is C-CH<sub>2</sub>OH, Y is C-NH<sub>2</sub>, Z is CH, and  $X^0$  is hydrido;

B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl, W is CH, X is C-NH<sub>2</sub>, Y is C-CH<sub>2</sub>CO<sub>2</sub>H, Z is CH, and  $X^0$  is hydrido;

B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidino-3-fluorobenzyl, W is N, X is C-CH<sub>2</sub>NH<sub>2</sub>, Y is C-CO<sub>2</sub>H, Z is CH, and  $X^0$  is hydrido;

B is cyclopentyl, A is single bond,  $Y^0$  is 4-amidinobenzyl, W is C-OH, X is C-CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>, Y is C-OH, Z is CH, and  $X^O$  is hydrido;

B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl, W is C-NH<sub>2</sub>, X is C-CH<sub>2</sub>OH, Y is C- NH<sub>2</sub>, Z is CH, and  $X^O$  is hydrido;

5 B is cyclopropyl, A is CH<sub>2</sub>,  $Y^0$  is 4-amidinobenzyl, W is CH, X is C-NH<sub>2</sub>, Y is C-CH<sub>2</sub>CO<sub>2</sub>H, Z is CH, and  $X^O$  is hydrido;

B is 2-(2R)-bicyclo[2.2.1]-heptyl, A is single bond,  $Y^0$  is 4-amidinobenzyl, W is N, X is C-CH<sub>2</sub>NH<sub>2</sub>, Y is C-CO<sub>2</sub>H, Z is CH, and  $X^O$  is hydrido;

10 B is cyclopentyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl, W is C-OH, X is C-CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>, Y is C-OH, Z is CH, and  $X^O$  is hydrido;

B is cyclohexyl, A is CH<sub>2</sub>CH<sub>2</sub>,  $Y^0$  is 4-amidinobenzyl, W is C-NH<sub>2</sub>, X is C-CH<sub>2</sub>OH, Y is C- NH<sub>2</sub>, Z is CH, and  $X^O$  is hydrido;

B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl, W is C-H, X is C-NH<sub>2</sub>, Y is C- NH<sub>2</sub>, Z is CH, and  $X^O$  is hydrido;

15 B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl, W is C-H, X is C-NH<sub>2</sub>, Y is C-CH<sub>2</sub>NH<sub>2</sub>, Z is CH, and  $X^O$  is hydrido;

B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl, W is C-H, X is C-CO<sub>2</sub>H, Y is C-CH<sub>2</sub>NH<sub>2</sub>, Z is CH, and  $X^O$  is hydrido;

20 B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl, W is CH, X is C-CH<sub>2</sub>CO<sub>2</sub>H, Y is C-CH<sub>2</sub>NH<sub>2</sub>, Z is CH, and  $X^O$  is hydrido;

B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl, W is CH, X is C-CH<sub>2</sub>CO<sub>2</sub>H, X is C-NH<sub>2</sub>, Z is CH, and  $X^O$  is hydrido;

B is isopropyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl, W is C-H, X is C-NH<sub>2</sub>, Y is C- NH<sub>2</sub>, Z is CH, and  $X^O$  is hydrido;

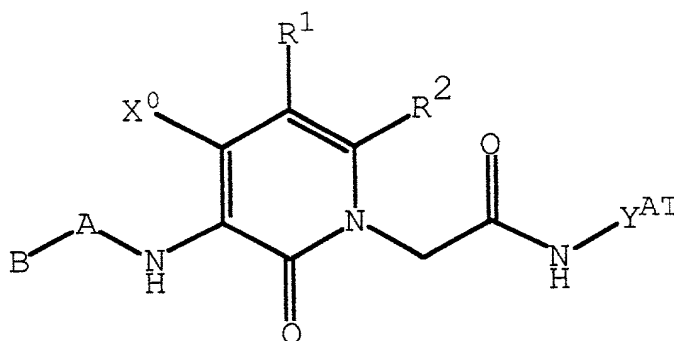
B is isopropyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl, W is C-H, X is C-NH<sub>2</sub>, Y is C-CH<sub>2</sub>NH<sub>2</sub>, Z is CH, and  $X^0$  is hydrido;

B is isopropyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl, W is C-H, X is C-CO<sub>2</sub>H, Y is C-CH<sub>2</sub>NH<sub>2</sub>, Z is CH, and  $X^0$  is hydrido;

5 B is isopropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl, W is CH, X is C-CH<sub>2</sub>CO<sub>2</sub>H, Y is C-CH<sub>2</sub>NH<sub>2</sub>, Z is CH, and  $X^0$  is hydrido;

B is isopropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl, W is CH, X is C-CH<sub>2</sub>CO<sub>2</sub>H, X is C-NH<sub>2</sub>, Z is CH, and  $X^0$  is hydrido.

Using the examples and methods described herein previously, the  
10 following additional examples having a guanidinoalkyl type  $Y^{AT}$  group could be prepared of the formula:



wherein;

$R^2$  is 3-aminophenoxy, B is phenyl, A is CH<sub>2</sub>,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is hydroxymethyl, and  $X^0$  is hydrido;

$R^2$  is phenoxy, B is phenyl, A is CH<sub>2</sub>CH<sub>2</sub>,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is hydroxymethyl, and  $X^0$  is hydrido;

$R^2$  is benzyloxy, B is phenyl, A is CH<sub>2</sub>CH<sub>2</sub>,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is hydroxymethyl, and  $X^0$  is hydrido;

20  $R^2$  is phenoxy, B is phenyl, A is CH<sub>2</sub>CH<sub>2</sub>,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is hydroxymethyl, and  $X^0$  is hydrido;

$R^2$  is benzylamino, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is hydroxymethyl, and  $X^O$  is hydrido;

$R^2$  is phenoxy, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is hydroxymethyl, and  $X^O$  is hydrido;

5  $R^2$  is 3-aminophenoxy, B is phenyl, A is  $CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is aminomethyl, and  $X^O$  is fluoro;

$R^2$  is phenoxy, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is aminomethyl, and  $X^O$  is fluoro;

$R^2$  is benzylthio, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is aminomethyl, and  $X^O$  is fluoro;

$R^2$  is phenoxy, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is aminomethyl, and  $X^O$  is fluoro;

$R^2$  is benzyloxy, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is aminomethyl, and  $X^O$  is fluoro;

15  $R^2$  is phenoxy, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is aminomethyl, and  $X^O$  is fluoro;

$R^2$  is 3-aminophenoxy, B is phenyl, A is  $CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is fluoro, and  $X^O$  is hydroxymethyl;

$R^2$  is phenoxy, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is fluoro, and  $X^O$  is hydroxymethyl;

20  $R^2$  is benzylamino, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is fluoro, and  $X^O$  is hydroxymethyl;

$R^2$  is phenoxy, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is fluoro, and  $X^O$  is hydroxymethyl;

$R^2$  is phenylthio, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is fluoro, and  $X^O$  is hydroxymethyl;

$R^2$  is phenoxy, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is fluoro, and  $X^O$  is hydroxymethyl;

5  $R^2$  is 3-aminophenoxy, B is phenyl, A is  $CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is methoxy, and  $X^O$  is aminomethyl;

$R^2$  is phenoxy, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is methoxy, and  $X^O$  is aminomethyl;

$R^2$  is benzyloxy, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is methoxy, and  $X^O$  is aminomethyl;

$R^2$  is phenoxy, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is methoxy, and  $X^O$  is aminomethyl;

$R^2$  is benzylthio, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is methoxy, and  $X^O$  is aminomethyl;

15  $R^2$  is phenoxy, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is methoxy, and  $X^O$  is aminomethyl;

$R^2$  is 3-aminophenoxy, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is aminomethyl, and  $X^O$  is chloro;

$R^2$  is 3-aminophenoxy, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3,5-diaminophenoxy, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;



$R^2$  is 3-carboxy-5-aminophenoxy, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-benzylamidocarbonyl)phenoxy, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl, chloro, and  $X^O$  is hydrido;

$R^2$  is 3,5-diaminophenoxy, B is isopropyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-carboxy-5-aminophenoxy, B is isopropyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-benzylamidocarbonyl)phenoxy, B is isopropyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3,5-diaminophenoxy, B is cyclobutyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-carboxy-5-aminophenoxy, B is cyclobutyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-benzylamidocarbonyl)phenoxy, B is cyclobutyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido.

$R^2$  is 3-aminophenylthio, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3,5-diaminophenylthio, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-carboxy-5-aminophenylthio, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-benzylamidocarbonyl)phenylthio, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl, chloro, and  $X^O$  is hydrido;

$R^2$  is 3,5-diaminophenylthio, B is isopropyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-carboxy-5-aminophenylthio, B is isopropyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-benzylamidocarbonyl)phenylthio, B is isopropyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3,5-diaminophenylthio, B is cyclobutyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-carboxy-5-aminophenylthio, B is cyclobutyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-benzylamidocarbonyl)phenylthio, B is cyclobutyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-2-thienyl, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3,5-diamino-2-thienyl, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-carboxy-5-amino-2-thienyl, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-benzylamidocarbonyl)-2-thienyl, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl, chloro, and  $X^O$  is hydrido;

$R^2$  is 3,5-diamino-2-thienyl, B is isopropyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-carboxy-5-amino-2-thienyl, B is isopropyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

5  $R^2$  is 3-amino-5-(N-benzylamidocarbonyl)-2-thienyl, B is isopropyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3,5-diamino-2-thienyl, B is cyclobutyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

10  $R^2$  is 3-carboxy-5-amino-2-thienyl, B is cyclobutyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-benzylamidocarbonyl)-2-thienyl, B is cyclobutyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

15  $R^2$  is 3-aminophenyl, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is aminomethyl, and  $X^O$  is chloro;

$R^2$  is 3,5-diaminophenyl, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is aminomethyl, and  $X^O$  is chloro;

20  $R^2$  is 3-carboxy-5-aminophenyl, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is aminomethyl, and  $X^O$  is chloro;

$R^2$  is 3-amino-5-(N-benzylamidocarbonyl)phenyl, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is aminomethyl, and  $X^O$  is chloro;

25  $R^2$  is 3,5-diaminophenyl, B is isopropyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is aminomethyl, and  $X^O$  is chloro;

$R^2$  is 3-carboxy-5-aminophenyl, B is isopropyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is aminomethyl, and  $X^O$  is chloro;

$R^2$  is 3-amino-5-(N-benzylamidocarbonyl)phenyl, B is isopropyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is aminomethyl,

5 and  $X^O$  is chloro;

$R^2$  is 3,5-diaminophenyl, B is cyclobutyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is aminomethyl, and  $X^O$  is chloro;

$R^2$  is 3-carboxy-5-aminophenyl, B is cyclobutyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is aminomethyl, and  $X^O$  is chloro;

10  $R^2$  is 3-amino-5-(N-benzylamidocarbonyl)phenyl, B is cyclobutyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is aminomethyl, and  $X^O$  is chloro;

$R^2$  is 3-aminophenyl, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

15  $R^2$  is 3,5-diaminophenyl, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-carboxy-5-aminophenyl, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

20  $R^2$  is 3-amino-5-(N-benzylamidocarbonyl)phenyl, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl, chloro, and  $X^O$  is hydrido;

$R^2$  is 3,5-diaminophenyl, B is isopropyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

25  $R^2$  is 3-carboxy-5-aminophenyl, B is isopropyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-benzylamidocarbonyl)phenyl, B is isopropyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3,5-diaminophenyl, B is cyclobutyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-carboxy-5-aminophenyl, B is cyclobutyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-benzylamidocarbonyl)phenyl, B is cyclobutyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido.

Formula (I) compounds of this invention possessing hydroxyl, thiol, and amine functional groups can be converted to a wide variety derivatives. Alternatively, derivatized Formula (I) compounds can be obtained by first derivatizing one or more intermediates in the processes of preparation before further transforming the derivatized intermediate to compounds of Formula (I). A hydroxyl group in the form of an alcohol or phenol can be readily converted to esters of carboxylic, sulfonic, carbamic, phosphonic, and phosphoric acids. Acylation to form a carboxylic acid ester is readily effected using a suitable acylating reagent such as an aliphatic acid anhydride or acid chloride. The corresponding aryl and heteroaryl acid anhydrides and acid chlorides can also be used. Such reactions are generally carried out using an amine catalyst such as pyridine in an inert solvent. Similarly, carbamic acid esters (urethanes) can be obtained by reacting a hydroxyl group with isocyanates and carbamoyl chlorides. Sulfonate, phosphonate, and phosphate esters can be prepared using the corresponding acid chloride and similar reagents. Compounds of Formula (I) that have at least one thiol group present can be converted to the corresponding thioesters derivatives analogous to those of alcohols and phenols using the same reagents and comparable reaction conditions. Compounds of Formula (I) that have at least one primary or secondary amine group present can be converted to the corresponding amide derivatives. Amides of carboxylic acids can be prepared using the appropriate acid chloride or anhydrides with reaction conditions analogous to those used with alcohols and phenols. Ureas of the corresponding primary or secondary amine can be prepared using

respectively, of an acid scavenger are used concurrently. Secondary or tertiary amines can be prepared from the corresponding primary or secondary amine. A primary amine can be dialkylated by reductive amination using an aldehyde, such as formaldehyde, and sodium cyanoborohydride in the presence of glacial acetic acid.

- 5 A primary amine can be monoalkylated by first mono-protecting the amine with a ready cleaved protecting group, such as trifluoroacetyl. An alkylating agent, such as dimethylsulfate, ~~in~~ the presence of a non-nucleophilic base, such as Barton's base (2-*tert*-butyl-1,1,3,3-tetramethylguanidine), gives the monomethylated protected amine. Removal of the protecting group using aqueous potassium hydroxide gives
- 10 the desired monoalkylated amine. Additional suitable procedures and methods for preparing these derivatives can be found in House's Modern Synthetic Reactions, W. A. Benjamin, Inc., Shriner, Fuson, and Curtin in The Systematic Identification of Organic Compounds, 5th Edition, John Wiley & Sons, and Fieser and Fieser in Reagents for Organic Synthesis published by John Wiley & Sons. Perfluoroalkyl
- 15 derivatives can be prepared as described by DesMarteau in J. Chem. Soc. Chem. Commun. 2241 (1998). Reagents of a wide variety that can be used to derivatize hydroxyl, thiol, and amines of compounds of Formula (I) are available from commercial sources or the references cited above, which are incorporated herein by reference.

20

### Assays for Biological Activity

#### TF-VIIa Assay

- 25 In this assay 100 nM recombinant soluble tissue factor and 2nM recombinant human factor VIIa are added to a 96-well assay plate containing 0.4 mM of the substrate, N-Methylsulfonyl-D-phe-gly-arg-p-nitroaniline and either inhibitor or buffer (5 mM CaCl<sub>2</sub>, 50 mM Tris-HCl, pH 8.0, 100 mM NaCl, 0.1% BSA). The reaction, in a final volume of 100 ul is measured immediately at 405 nm to determine background absorbance. The plate is incubated at room temperature
- 30 for 60 min, at which time the rate of hydrolysis of the substrate is measured by monitoring the reaction at 405 nm for the release of p-nitroaniline. Percent inhibition of TF-VIIa activity is calculated from OD<sub>405nm</sub> value from the experimental and control sample.

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### Xa Assay

0.3 nM human factor Xa and 0.15 mM N- $\alpha$ -Benzyloxycarbonyl-D-arginyl-L-glycyl-L-arginine-p-nitroaniline-dihydrochloride (S-2765) are added to a 96-well assay plate containing either inhibitor or buffer (50 mM Tris-HCl, pH 8.0, 100 mM NaCl, 0.1% BSA). The reaction, in a final volume of 100  $\mu$ l is measured immediately at 405 nm to determine background absorbance. The plate is incubated at room temperature for 60 min, at which time the rate of hydrolysis of the substrate is measured by monitoring the reaction at 405 nm for the release of p-nitroaniline. Percent inhibition of Xa activity is calculated from OD<sub>405nm</sub> value from the experimental and control sample.

### Thrombin Assay

0.28 nM human thrombin and 0.06 mM H-D-Phenylalanyl-L-pipecolyl-L-arginine-p-nitroaniline dihydrochloride are added to a 96-well assay plate containing either inhibitor or buffer (50 mM Tris-HCl, pH 8.0, 100 mM NaCl, 0.1% BSA). The reaction, in a final volume of 100  $\mu$ l is measured immediately at 405 nm to determine background absorbance. The plate is incubated at room temperature for 60 min, at which time the rate of hydrolysis of the substrate is measured by monitoring the reaction at 405 nm for the release of p-nitroaniline. Percent inhibition of thrombin activity is calculated from OD<sub>405nm</sub> value from the experimental and control sample.

### Trypsin Assay

5  $\mu$ g/ml trypsin, type IX from porcine pancreas and 0.375 mM N- $\alpha$ -Benzoyl-L-arginine-p-nitroanilide (L-BAPNA) are added to a 96-well assay plate containing either inhibitor or buffer (50 mM Tris-HCl, pH 8.0, 100 mM NaCl, 0.1% BSA). The reactions, in a final volume of 100  $\mu$ l are measured immediately at 405 nm to determine background absorbance. The plate is incubated at room temperature for 60 min, at which time the rate of hydrolysis of the substrate is measured by monitoring the reaction at 405 nm for the release of p-nitroaniline. Percent inhibition of trypsin activity is calculated from OD<sub>405nm</sub> value from the experimental and control sample.

Recombinant soluble TF, consisting of amino acids 1-219 of the mature protein sequence was expressed in E. coli and purified using a Mono Q Sepharose FPLC. Recombinant human VIIa was purchased from American

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The biological activity of the compounds of **Examples 1** through **22** as determined by the bioassay procedures is summarized in the **Table 1**.

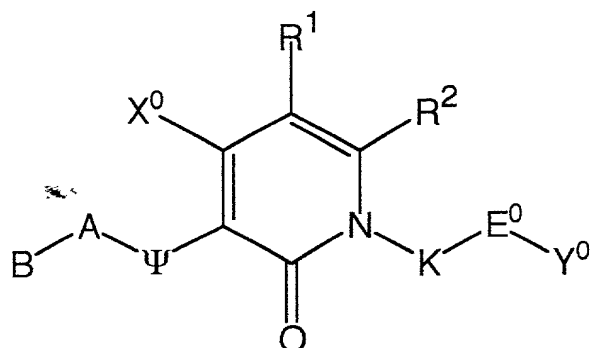


Table 1. Inhibitory Activity of Pyridones toward Factor Xa,  
TF-VIIA, Thrombin II, and Trypsin II.

Example Number	TF-VIIA IC50 (uM)	Thrombin II IC50 (uM)	Factor Xa IC50 (uM)	Trypsin II IC50 (uM)
1	4.6	0.7	0.07	0.21
2	46	5.5	7.7	0.5
3	26.1	11.0	>30	0.86
4	>30	22.7	23.1	0.48
5	40%	40%	27%	--
6	>30	>30	>30	>30
7	>30	>30	>30	>30
8	>30	>30	>30	>30
9	>30	>30	>30	>30
10	>30	>30	>30	>30
11	>30	>30	>30	>30
12	>30	>30	>30	>30
13	>30	>30	>30	>30
14	>30	>30	>30	>30
15	>30	>30	>30	>30
16	>30	>30	>30	>30
17	1.1	0.2	0.1	0.3
18	0.8	<0.04	<4.0	0.2
19	18.0	0.4	4.1	<0.1
20	23.0	0.3	5.7	0.5
21	>30	0.5	17	0.6
22	>30	<0.04	>0	11.1

What we claim is:

1. A compound of the Formula:



or a pharmaceutically acceptable salt thereof, wherein;

- 5           B is phenyl or a heteroaryl of 5 or 6 ring members, wherein a nitrogen with a removable hydrogen or a carbon adjacent to the carbon at the point of attachment of said phenyl or heteroaryl ring to A is optionally substituted by  $R^{32}$ , a nitrogen with a removable hydrogen or a carbon at the other position adjacent to the point of attachment is optionally substituted by  $R^{36}$ , a nitrogen
- 10   with a removable hydrogen or a carbon adjacent to  $R^{32}$  and two atoms from the point of attachment is optionally substituted by  $R^{33}$ , a nitrogen with a removable hydrogen or a carbon adjacent to  $R^{36}$  and two atoms from the point of attachment is optionally substituted by  $R^{35}$ , and a nitrogen with a removable hydrogen or a carbon adjacent to both  $R^{33}$  and  $R^{35}$  is optionally substituted by
- 15    $R^{34}$ ;

$R^9, R^{10}, R^{11}, R^{12}, R^{13}, R^{32}, R^{33}, R^{34}, R^{35}$ , and  $R^{36}$  are

- independently selected from the group consisting of hydrido, acetamido, haloacetamido, amidino, guanidino, alkylendioxy, haloalkylthio, alkanoyloxy, alkoxy, cycloalkoxy, cycloalkylalkoxy, aralkoxy, aryloxy, heteroaryloxy,
- 20   heteroaralkoxy, heterocyclyloxy, heterocyclylalkoxy, alkoxyalkyl, haloalkoxyalkyl, hydroxy, amino, alkoxyamino, nitro, alkylamino,

- N-alkyl-N-arylamino, arylamino, aralkylamino, heteroarylamino, heteroaralkylamino, heterocyclylamino, heterocyclylalkylamino, alkylthio, alkylthioalkyl, alkylsulfinyl, arylsulfinyl, aralkylsulfinyl, cycloalkylsulfinyl, heteroarylsulfinyl, alkylsulfonyl, arylsulfonyl, aralkylsulfonyl, cycloalkylsulfonyl, heteroarylsulfonyl, alkylsulfonylalkyl, aryl, aralkyl, cycloalkyl, cycloalkylalkyl, heteroaryl, heterocyclyl, alkylsulfonamido, amidosulfonyl, alkanoyl, haloalkanoyl, alkyl, alkenyl, halo, haloalkyl, haloalkenyl, haloalkoxy, hydroxyhaloalkyl, hydroxyalkyl, aminoalkyl, haloalkoxyalkyl, carboxyalkyl, carboalkoxy, carboxy, carboxamido, carboxamidoalkyl, and cyano;

$R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$  are independently optionally  $Q^b$ ;

- B is optionally selected from the group consisting of hydrido, trialkylsilyl, C2-C8 alkyl, C3-C8 alkylenyl, C3-C8 alkenyl, C3-C8 alkynyl, and C2-C8 haloalkyl, wherein each member of group B may be optionally substituted at any carbon up to and including 6 atoms from the point of attachment of B to A with one or more of the group consisting of  $R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$ ;

- B is optionally a C3-C12 cycloalkyl or a C4-C9 heterocyclyl, wherein each ring carbon may be optionally substituted with  $R^{33}$ , a ring carbon other than the ring carbon at the point of attachment of B to A may be optionally substituted with oxo provided that no more than one ring carbon is substituted by oxo at the same time, ring carbons and nitrogens adjacent to the carbon at the point of attachment may be optionally substituted with  $R^9$  or  $R^{13}$ , a ring carbon or nitrogen adjacent to the  $R^9$  position and two atoms from the point of attachment may be substituted with  $R^{10}$ , a ring carbon or nitrogen adjacent to the  $R^{13}$  position and two atoms from the point of attachment may be substituted with  $R^{12}$ , a ring carbon three atoms from the point of attachment and adjacent to the  $R^{10}$  position may be substituted with  $R^{11}$ , a ring carbon

three atoms from the point of attachment and adjacent to the  $R^{12}$  position may be substituted with  $R^{33}$ , and a ring carbon four atoms from the point of attachment and adjacent to the  $R^{11}$  and  $R^{33}$  positions may be substituted with  $R^{34}$ ;

- 5           A is selected from the group consisting of a bond,  $(W^7)_{rr}$ -  
 $(CH(R^{15}))_{pa}$  and  $(CH(R^{15}))_{pa}-(W^7)_{rr}$  wherein  $rr$  is 0 or 1,  $pa$  is an integer  
selected from 0 through 6, and  $W^7$  is selected from the group consisting of O,  
S, C(O),  $(R^7)NC(O)$ ,  $(R^7)NC(S)$ , and  $N(R^7)$ , with the proviso that no more  
than one of the group consisting of  $rr$  and  $pa$  is 0 at the same time;
- 10            $R^7$  is selected from the group consisting of hydrido, hydroxy, and  
alkyl;  
 $R^{15}$  is selected from the group consisting of hydrido, hydroxy, halo,  
alkyl, and haloalkyl;  
 $\Psi$  is NH or NOH;
- 15            $R^1$  and  $X^0$  are independently selected from the group consisting of  
hydrido, alkyl, alkenyl, cyano, halo, haloalkyl, haloalkoxy, haloalkylthio, amino,  
aminoalkyl, alkylamino, amidino, hydroxy, hydroxyamino, alkoxy,  
hydroxyalkyl, alkoxyamino, thiol, and alkylthio;  
 $X^0$  and  $R^1$  or  $R^1$  and  $R^2$  is optionally  $-W=X-Y=Z-$  wherein
- 20            $-W=X-Y=Z-$  forms an aryl or C5-C6 heteroaryl;  
W, X, Y, and Z are independently selected from the group consisting of  
 $C(R^9)$ ,  $C(R^{10})$ ,  $C(R^{11})$ ,  $C(R^{12})$ , N,  $N(R^{10})$ , O, S, and a bond with the proviso  
that one of W, X, Y, and Z is independently selected to be a bond when one of  
W, X, Y, and Z is O or S, with the further provision that no more than one of W,  
25           X, Y, and Z is optionally O or S, and with the additional provision that no more  
than three of W, X, Y, and Z are optionally N or  $N(R^{10})$ ;

$X^0$  and  $R^1$  or  $R^1$  and  $R^2$  is optionally bonded together to form C5-C8 cycloalkenyl ring or a partially saturated C5-C8 heterocyclyl ring, wherein said cycloalkenyl ring or heterocyclyl ring is optionally substituted with one or more of the group consisting of  $R^9$ ,  $R^{10}$ ,  $R^{11}$ ,  $R^{12}$ , and  $R^{13}$ ;

5  $R^2$  is  $Z^0-Q$ ;

$Z^0$  is selected from the group consisting of a bond,

$W^0-(CH(R^{42}))_p$  wherein  $p$  is an integer selected from 0 through 3, and  $W^0$  is selected from the group consisting of O, S, C(O), S(O),  $N(R^{41})$ , and  $ON(R^{41})$ ,  $(CH(R^{41}))_g-O$  wherein  $g$  is an integer selected from 1 through 3,  $(CH(R^{41}))_g-$

10 S wherein  $g$  is an integer selected from 1 through 3 with the proviso that  $Z^0$  is directly bonded to the pyridone ring;

$Z^0$  is optionally  $W^{22}-(CH(R^{42}))_h$  wherein  $h$  is 0 or 1 and  $W^{22}$  is selected from the group consisting of  $CR^{41}=CR^{42}$ , 1,2-cyclopropyl,

1,2-cyclobutyl, 1,2-cyclohexyl, 1,3-cyclohexyl, 1,2-cyclopentyl,  
 15 1,3-cyclopentyl, 2,3-morpholinyl, 2,4-morpholinyl, 2,6-morpholinyl,  
 3,4-morpholinyl, 3,5-morpholinyl, 1,2-piperazinyl, 1,3-piperazinyl,  
 2,3-piperazinyl, 2,6-piperazinyl, 1,2-piperidinyl, 1,3-piperidinyl,  
 2,3-piperidinyl, 2,4-piperidinyl, 2,6-piperidinyl, 3,4-piperidinyl,  
 1,2-pyrrolidinyl, 1,3-pyrrolidinyl, 2,3-pyrrolidinyl, 2,4-pyrrolidinyl,  
 20 2,5-pyrrolidinyl, 3,4-pyrrolidinyl, 2,3-tetrahydrofuranyl,  
 2,4-tetrahydrofuranyl, 2,5-tetrahydrofuranyl, and 3,4-tetrahydrofuranyl, wherein

$Z^0$  is directly bonded to the pyridone ring and  $W^{22}$  is optionally substituted with one or more substituents selected from the group consisting of  $R^9$ ,  $R^{10}$ ,  $R^{11}$ ,  $R^{12}$ , and  $R^{13}$ , with the proviso that  $W^{22}$  is selected from other than a

25 cycloalkyl when  $Y^0$  is selected from the group consisting of thiazolyl, imidazolyl, and pyridyl and any one of  $Q^b$ ,  $R^{16}$  and  $R^{19}$  is selected from the

group consisting of hydrido, amino, aminoalkyl, hydroxyalkyl, halo, trifluoromethyl, alkyl, and alkoxy;

$R^{41}$  is selected from the group consisting of hydrido, hydroxy, amino, and alkyl;

5  $R^{42}$  is selected from the group consisting of amidino, hydroxyamino, hydrido, hydroxy, amino, and alkyl;

Q is phenyl or a heteroaryl of 5 or 6 ring members, wherein a nitrogen with a removable hydrogen or a carbon adjacent to the carbon at the point of attachment of said phenyl or heteroaryl ring to  $Z^0$  is optionally substituted by

10  $R^9$ , a nitrogen with a removable hydrogen or a carbon at the other position adjacent to the point of attachment is optionally substituted by  $R^{13}$ , a nitrogen with a removable hydrogen or a carbon adjacent to  $R^9$  and two atoms from the point of attachment is optionally substituted by  $R^{10}$ , a nitrogen with a removable hydrogen or a carbon adjacent to  $R^{13}$  and two atoms from the point of attachment is optionally substituted by  $R^{12}$ , and a nitrogen with a removable hydrogen or a carbon adjacent to both  $R^{10}$  and  $R^{12}$  is optionally substituted by  $R^{11}$ , with the proviso that Q is other than phenyl when  $Z^0$  is a bond;

Q is optionally hydrido with the proviso that  $Z^0$  is other than a bond;

K is  $(CR^{4a}R^{4b})_n$  wherein n is 1 or 2;

20  $R^{4a}$  and  $R^{4b}$  are independently selected from the group consisting of halo, hydrido, hydroxyalkyl, alkyl, alkoxyalkyl, alkylthioalkyl, and haloalkyl;

$E^0$  is  $E^1$ , when K is  $(CR^{4a}R^{4b})_n$ , wherein  $E^1$  is selected from the group consisting of a bond, C(O), C(S), C(O)N( $R^7$ ), ( $R^7$ )NC(O), S(O)<sub>2</sub>, ( $R^7$ )NS(O)<sub>2</sub>, and S(O)<sub>2</sub>N( $R^7$ );

- $Y^0$  is phenyl or a heteroaryl of 5 or 6 ring members, wherein one carbon of said phenyl or said heteroaryl is substituted by  $Q^s$ , a carbon two or three contiguous atoms from the point of attachment of  $Q^s$  to the phenyl or heteroaryl ring is substituted by  $Q^b$ , a carbon adjacent to the point of attachment of  $Q^s$  is optionally substituted by  $R^{17}$ , another carbon adjacent to the point of attachment of  $Q^s$  is optionally substituted by  $R^{18}$ , a carbon adjacent to  $Q^b$  is optionally substituted by  $R^{16}$ , and another carbon adjacent to  $Q^b$  is optionally substituted by  $R^{19}$ ;

- $R^{16}$ ,  $R^{17}$ ,  $R^{18}$ , and  $R^{19}$  are independently selected from the group consisting of hydrido, amidino, guanidino, carboxy, haloalkylthio, alkoxy, hydroxy, amino, nitro, alkoxyamino, lower alkylamino, alkylthio, alkylsulfinyl, alkylsulfonyl, alkanoyl, haloalkanoyl, alkyl, alkenyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, aminoalkyl, haloalkoxyalkyl, carboalkoxy, and cyano;
- $R^{16}$  or  $R^{19}$  is optionally selected from the group consisting of  $NR^{20}R^{21}$ ,  $N(R^{26})C(NR^{25})N(R^{23})(R^{24})$ , and  $C(NR^{25})NR^{23}R^{24}$ , with the proviso that  $R^{16}$ ,  $R^{19}$ , and  $Q^b$  are not simultaneously hydrido;

- $Q^b$  is selected from the group consisting of  $NR^{20}R^{21}$ , aminoalkyl, hydrido,  $N(R^{26})C(NR^{25})N(R^{23})(R^{24})$ , and  $C(NR^{25})NR^{23}R^{24}$ , with the proviso that no more than one of  $R^{20}$  and  $R^{21}$  is selected from the group consisting of hydroxy, amino, alkylamino, and dialkylamino at the same time and with the further proviso that no more than one of  $R^{23}$  and  $R^{24}$  is selected from the group consisting of hydroxy, amino, alkylamino, and dialkylamino at the same time;

$R^{20}, R^{21}, R^{23}, R^{24}, R^{25}$ , and  $R^{26}$  are independently selected from the group consisting of hydrido, alkyl, hydroxy, aminoalkyl, amino, dialkylamino, alkylamino, and hydroxyalkyl;

$Q^s$  is selected from the group consisting of a bond,  $(CR^{37}R^{38})_b$

- 5 wherein  $b$  is an integer selected from 1 through 4, and  $(CH(R^{14}))_c-W^1-(CH(R^{15}))_d$  wherein  $c$  and  $d$  are integers independently selected from 1 through 3 and  $W^1$  is selected from the group consisting of  $C(O)N(R^{14})$ ,  $(R^{14})NC(O)$ ,  $S(O)$ ,  $S(O)_2$ ,  $S(O)_2N(R^{14})$ ,  $N(R^{14})S(O)_2$ , and  $N(R^{14})$ , with the proviso that  $R^{14}$  is selected from other than halo when directly bonded to N
- 10 and with the further proviso that  $(CR^{37}R^{38})_b$ , and  $(CH(R^{14}))_c$  are bonded to  $E^0$ ;

$R^{14}$  is selected from the group consisting of hydrido, halo, alkyl, and haloalkyl;

- $R^{37}$  and  $R^{38}$  are independently selected from the group consisting of
- 15 hydrido, alkyl, and haloalkyl;
- $R^{38}$  is optionally aroyl or heteroaroyl, wherein  $R^{38}$  is optionally substituted with one or more substituents selected from the group consisting of  $R^{16}$ ,  $R^{17}$ ,  $R^{18}$ , and  $R^{19}$ ;

$Y^0$  is optionally  $Y^{AT}$  wherein  $Y^{AT}$  is  $Q^b-Q^s$ ;

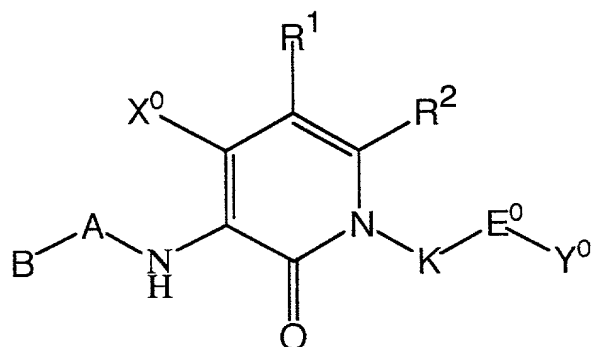
- 20  $Y^0$  is optionally  $Q^b-Q^{ss}$  wherein  $Q^{ss}$  is  $(CH(R^{14}))_e-W^2-(CH(R^{15}))_h$ , wherein  $e$  and  $h$  are independently 1 or 2 and  $W^2$  is  $CR^{4a}=CR^{4b}$  with the proviso that  $(CH(R^{14}))_e$  is bonded to  $E^0$ ;



$Y^0$  is optionally  $Q^b-Q^{ssss}$  or  $Q^b-Q^{sssr}$  wherein  $Q^{ssss}$  is  $(CH(R^{38}))_r-$   
 $W^5$  and  $Q^{sssr}$  is  $(CH(R^{38}))_r-W^6$ ,  $r$  is 1 or 2,  $W^5$  and  $W^6$  are independently  
 selected from the group consisting of 1,4-indenyl, 1,5-indenyl, 1,6-indenyl, 1,7-  
 indenyl, 2,7-indenyl, 2,6-indenyl, 2,5-indenyl, 2,4-indenyl, 3,4-indenyl, 3,5-  
 5 indenyl, 3,6-indenyl, 3,7-indenyl, 2,4-benzofuranyl,  
 2,5-benzofuranyl, 2,6-benzofuranyl, 2,7-benzofuranyl, 3,4-benzofuranyl, 3,5-  
 benzofuranyl, 3,6-benzofuranyl, 3,7-benzofuranyl,  
 2,4-benzothiophenyl, 2,5-benzothiophenyl, 2,6-benzothiophenyl,  
 2,7-benzothiophenyl, 3,4-benzothiophenyl, 3,5-benzothiophenyl,  
 10 3,6-benzothiophenyl, 3,7-benzothiophenyl, 2,7-imidazo(1,2-a)pyridinyl,  
 3,4-imidazo(1,2-a)pyridinyl, 3,5-imidazo(1,2-a)pyridinyl,  
 3,6-imidazo(1,2-a)pyridinyl, 3,7-imidazo(1,2-a)pyridinyl, 2,4-indolyl,  
 2,5-indolyl, 2,6-indolyl, 2,7-indolyl, 3,4-indolyl, 3,5-indolyl, 3,6-indolyl,  
 3,7-indolyl, 1,4-isoindolyl, 1,5-isoindolyl, 1,6-isoindolyl, 2,4-isoindolyl,  
 15 2,5-isoindolyl, 2,6-isoindolyl, 2,7-isoindolyl, 1,3-isoindolyl, 3,4-indazolyl,  
 3,5-indazolyl, 3,6-indazolyl, 3,7-indazolyl, 2,4-benzoxazolyl,  
 2,5-benzoxazolyl, 2,6-benzoxazolyl, 2,7-benzoxazolyl, 3,4-benzisoxazolyl, 3,5-  
 benzisoxazolyl, 3,6-benzisoxazolyl, 3,7-benzisoxazolyl, 1,4-naphthyl, 1,5-  
 naphthyl, 1,6-naphthyl, 1,7-naphthyl, 1,8-naphthyl, 2,4-naphthyl,  
 20 2,5-naphthyl, 2,6-naphthyl, 2,7-naphthyl, 2,8-naphthyl, 2,4-quinolinyl,  
 2,5-quinolinyl, 2,6-quinolinyl, 2,7-quinolinyl, 2,8-quinolinyl, 3,4-quinolinyl, 3,5-  
 quinolinyl, 3,6-quinolinyl, 3,7-quinolinyl, 3,8-quinolinyl, 4,5-quinolinyl, 4,6-  
 quinolinyl, 4,7-quinolinyl, 4,8-quinolinyl, 1,4-isoquinolinyl,  
 1,5-isoquinolinyl, 1,6-isoquinolinyl, 1,7-isoquinolinyl, 1,8-isoquinolinyl, 3,4-  
 25 isoquinolinyl, 3,5-isoquinolinyl, 3,6-isoquinolinyl, 3,7-isoquinolinyl, 3,8-  
 isoquinolinyl, 4,5-isoquinolinyl, 4,6-isoquinolinyl, 4,7-isoquinolinyl, 4,8-  
 isoquinolinyl, 3,4-cinnolinyl, 3,5-cinnolinyl, 3,6-cinnolinyl, 3,7-cinnolinyl, 3,8-  
 cinnolinyl, 4,5-cinnolinyl, 4,6-cinnolinyl, 4,7-cinnolinyl, and 4,8-cinnolinyl, and  
 each carbon and hyrido containing nitrogen member of the ring of the  $W^5$  and  
 30 of the ring of the  $W^6$ , other than the points of attachment of  $W^5$  and  $W^6$ , is  
 optionally substituted with one or more of the group consisting of  $R^9$ ,  $R^{10}$ ,

- $R^{11}$ , and  $R^{12}$ , with the proviso that  $W^5$  and  $W^6$  are selected from other than 2,4-benzofuranyl, 2,5-benzofuranyl, 2,6-benzofuranyl, 2,7-benzofuranyl, 3,4-benzofuranyl, 3,5-benzofuranyl, 3,6-benzofuranyl, 3,7-benzofuranyl, 2,4-indolyl, 2,5-indolyl, 2,6-indolyl, 2,7-indolyl, 3,4-indolyl, 3,5-indolyl, 3,6-indolyl, 3,7-indolyl, 1,4-isoindolyl, 1,5-isoindolyl, 1,6-isoindolyl, 2,4-isoindolyl, 2,5-isoindolyl, 2,6-isoindolyl, 2,7-isoindolyl, 1,3-isoindolyl, 3,4-indazolyl, 3,5-indazolyl, 3,6-indazolyl, 3,7-indazolyl, 2,4-benzoxazolyl, 2,5-benzoxazolyl, 2,6-benzoxazolyl, 2,7-benzoxazolyl, 3,4-benzisoxazolyl, 3,5-benzisoxazolyl, 3,6-benzisoxazolyl, and 3,7-benzisoxazolyl, wherein  $r$  is the integer one, with the further proviso that  $Q^b$  is bonded to lowest number substituent position of each  $W^5$ , with the still further proviso that  $Q^b$  is bonded to highest number substituent position of each  $W^6$ , and with the additional proviso that  $(CH(R^{38}))_r$  is bonded to  $E^0$ .

2. Compound of Claim 1 of the Formula:



or a pharmaceutically acceptable salt thereof, wherein;

- $B$  is phenyl or a heteroaryl of 5 or 6 ring members, wherein a carbon adjacent to the carbon at the point of attachment of said phenyl or heteroaryl ring to  $A$  is optionally substituted by  $R^{32}$ , the other carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^{36}$ , a carbon adjacent to  $R^{32}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{33}$ , a carbon adjacent to  $R^{36}$  and two atoms from the

carbon at the point of attachment is optionally substituted by  $R^{35}$ , and any carbon adjacent to both  $R^{33}$  and  $R^{35}$  is optionally substituted by  $R^{34}$ ;

- $R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$  are independently selected from the group consisting of hydrido, acetamido, haloacetamido, amidino, guanidino, alkylendioxy, haloalkylthio, alkanoyloxy, alkoxy, hydroxy, amino, alkoxyamino, haloalkanoyl, nitro, lower alkylamino, alkylthio, aryl, aralkyl, cycloalkyl, cycloalkylalkyl, heteroaryl, heterocyclyl, alkylsulfonamido, amidosulfonyl, monoalkyl amidosulfonyl, dialkyl amidosulfonyl, alkyl, alkenyl, halo, haloalkyl, haloalkenyl, haloalkoxy, hydroxyalkyl, hydroxyhaloalkyl, aminoalkyl, carboalkoxy, carboxy, carboxamido, cyano, and  $Q^b$ ;

- B is optionally selected from the group consisting of hydrido, trialkylsilyl, C2-C8 alkyl, C3-C8 alkylenyl, C3-C8 alkenyl, C3-C8 alkynyl, and C2-C8 haloalkyl, wherein each member of group B is optionally substituted at any carbon up to and including 6 atoms from the point of attachment of B to A with one or more of the group consisting of  $R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$ ;

- B is optionally a C3-C12 cycloalkyl or C4-C9 heterocyclyl, wherein each ring carbon may be optionally substituted with  $R^{33}$ , a ring carbon other than the ring carbon at the point of attachment of B to A may be optionally substituted with oxo provided that no more than one ring carbon is substituted by oxo at the same time, ring carbons and nitrogens adjacent to the carbon at the point of attachment may be optionally substituted with  $R^9$  or  $R^{13}$ , a ring carbon or nitrogen adjacent to the  $R^9$  position and two atoms from the point of attachment may be substituted with  $R^{10}$ , a ring carbon or nitrogen adjacent to the  $R^{13}$  position and two atoms from the point of attachment may be substituted with  $R^{12}$ , a ring carbon three atoms from the point of attachment and adjacent to the  $R^{10}$  position may be substituted with  $R^{11}$ , a ring carbon three atoms from the point of attachment and adjacent to the  $R^{12}$  position may

be substituted with  $R^{33}$ , and a ring carbon four atoms from the point of attachment and adjacent to the  $R^{11}$  and  $R^{33}$  positions may be substituted with  $R^{34}$ ;

$R^9$ ,  $R^{10}$ ,  $R^{11}$ ,  $R^{12}$ , and  $R^{13}$  are independently selected from the group

- 5 consisting of hydrido, acetamido, haloacetamido, alkoxyamino, alkanoyl, haloalkanoyl, amidino, guanidino, alkylenedioxy, haloalkylthio, alkoxy, cycloalkoxy, cycloalkylalkoxy, aralkoxy, aryloxy, heteroaryloxy, heteroaralkoxy, heterocyclyloxy, heterocyclylalkoxy, hydroxy, amino, alkylamino, N-alkyl-N-arylamino, arylamino, aralkylamino, heteroarylamino,
- 10 heteroaralkylamino, heterocyclylamino, heterocyclylalkylamino, alkylthio, alkylsulfinyl, arylsulfinyl, aralkylsulfinyl, cycloalkylsulfinyl, heteroarylsulfinyl, alkylsulfamido, alkylsulfonyl, arylsulfonyl, aralkylsulfonyl, cycloalkylsulfonyl, heteroarylsulfonyl, amidosulfonyl, alkyl, aryl, aralkyl, cycloalkyl, cycloalkylalkyl, heteroaryl, heterocyclyl, halo, haloalkyl, haloalkoxy,
- 15 hydroxyalkyl, hydroxyhaloalkyl, aminoalkyl, carboalkoxy, carboxy, carboxyalkyl, carboxamido, and cyano;

A is a bond or  $(CH(R^{15}))_{pa}-(W^7)_{rr}$  wherein rr is 0 or 1, pa is an integer selected from 0 through 3, and  $W^7$  is selected from the group consisting of O, S, C(O),  $(R^7)NC(O)$ ,  $(R^7)NC(S)$ , and  $N(R^7)$ ;

- 20  $R^7$  is selected from the group consisting of hydrido, hydroxy and alkyl;
- $R^{15}$  is selected from the group consisting of hydrido, hydroxy, halo, alkyl, and haloalkyl;

- $R^1$  and  $X^0$  are independently selected from the group consisting of hydrido, alkyl, cyano, halo, haloalkyl, haloalkoxy, amino, aminoalkyl,
- 25 alkylamino, amidino, hydroxy, hydroxyamino, alkoxy, hydroxyalkyl, alkoxyamino, thiol, and alkylthio;

$X^0$  and  $R^1$  or  $R^1$  and  $R^2$  is optionally -W=X-Y=Z- wherein -W=X-Y=Z- forms an aryl or heteroaryl of 5 or 6 ring-members;

W, X, Y, and Z are independently selected from the group consisting of  $C(R^9)$ ,  $C(R^{10})$ ,  $C(R^{11})$ ,  $C(R^{12})$ , N,  $N(R^{10})$ , O, S and a bond with the proviso that one of W, X, Y, and Z is independently selected to be a bond when one of W, X, Y, and Z is O or S, with the further proviso that no more than one of W, X, Y, and Z is optionally selected from the group consisting of O and S, and with the additional proviso that no more than three of W, X, Y, and Z are optionally N or  $N(R^{10})$ ;

$X^0$  and  $R^1$  or  $R^1$  and  $R^2$  is optionally bonded together to form C5-C8 cycloalkenyl ring or a partially saturated C5-C8 heterocyclyl ring, wherein said cycloalkenyl ring or heterocyclyl ring is optionally substituted with one or more of the group consisting of  $R^9$ ,  $R^{10}$ ,  $R^{11}$ ,  $R^{12}$ , and  $R^{13}$ ;

$R^2$  is  $Z^0$ -Q;

$Z^0$  is selected from the group consisting of a bond,  $W^0-(CH(R^{42}))_p$  wherein p is an integer selected from 0 through 3 and  $W^0$  is selected from the group consisting of O, S, and  $N(R^{41})$ , and  $(CH(R^{41}))_g-O$  wherein g is an integer selected from 1 through 3, with the proviso that  $Z^0$  is directly bonded to the pyridone ring;

$Z^0$  is optionally  $W^{22}-(CH(R^{42}))_h$  wherein h is 0 or 1 and  $W^{22}$  is selected from the group consisting of 1,2-cyclopropyl, 1,2-cyclobutyl, 1,2-cyclohexyl, 1,3-cyclohexyl, 1,2-cyclopentyl, 1,3-cyclopentyl, 2,3-morpholinyl, 2,4-morpholinyl, 2,6-morpholinyl, 3,4-morpholinyl, 3,5-morpholinyl, 1,2-piperazinyl, 1,3-piperazinyl, 2,3-piperazinyl, 2,6-piperazinyl, 1,2-piperidinyl, 1,3-piperidinyl, 2,3-piperidinyl, 2,4-piperidinyl, 2,6-piperidinyl, 3,4-piperidinyl, 1,2-pyrrolidinyl, 1,3-pyrrolidinyl, 2,3-pyrrolidinyl, 2,4-pyrrolidinyl, 2,5-pyrrolidinyl, 3,4-pyrrolidinyl, 2,3-tetrahydrofuranyl, 2,4-tetrahydrofuranyl, 2,5-tetrahydrofuranyl, and 3,4-tetrahydrofuranyl, wherein  $Z^0$  is directly bonded to the pyridone ring and  $W^{22}$  is optionally substituted with one or more

substituents selected from the group consisting of  $R^9$ ,  $R^{10}$ ,  $R^{11}$ ,  $R^{12}$ , and  $R^{13}$ ,

with the proviso that  $W^{22}$  is selected from other than a cycloalkyl wherein  $Y^0$  is selected from the group consisting of thiazolyl, imidazolyl, and pyridyl and any one of  $Q^b$ ,  $R^{16}$  and  $R^{19}$  is from the group consisting of hydrido,

5 amino, aminoalkyl, hydroxyalkyl, halo, trifluoromethyl, alkyl, and alkoxy;

$R^{41}$  is selected from the group consisting of hydrido, hydroxy, <sup>amino,</sup> and alkyl;

$R^{42}$  is selected from the group consisting of amidino, hydroxyamino, hydrido, hydroxy, amino, and alkyl;

10 Q is phenyl or a heteroaryl of 5 or 6 ring members, wherein a carbon adjacent to the carbon at the point of attachment of said phenyl or heteroaryl ring to  $Z^0$  is optionally substituted by  $R^9$ , the other carbon adjacent to the

carbon at the point of attachment is optionally substituted by  $R^{13}$ , a carbon adjacent to  $R^9$  and two atoms from the carbon at the point of attachment is

15 optionally substituted by  $R^{10}$ , a carbon adjacent to  $R^{13}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{12}$ , and any carbon adjacent to both  $R^{10}$  and  $R^{12}$  is optionally substituted by  $R^{11}$ , with the proviso that Q is other than a phenyl when  $Z^0$  is a bond;

20 Q is optionally hydrido with the proviso that  $Z^0$  is selected from other than a bond;

K is  $CHR^{4a}$  wherein  $R^{4a}$  is selected from the group consisting of hydrido, hydroxyalkyl, alkyl, alkoxyalkyl, alkylthioalkyl, and haloalkyl;

$E^0$  is selected from the group consisting of a bond,  $C(O)N(H)$ ,  $(H)NC(O)$ ,  $(R^7)NS(O)_2$ , and  $S(O)_2N(R^7)$ ;

$Q^s$  is selected from the group consisting of a bond,  $(CR^{37}R^{38})_b$   
 wherein b is an integer selected from 1 through 4, and  $(CH(R^{14}))_c-W^1-$   
 $(CH(R^{15}))_d$  wherein c and d are integers independently selected from 1  
 through 3 and  $W^1$  is selected from the group consisting of  $C(O)N(R^{14})$ ,  
 5  $(R^{14})NC(O)$ ,  $S(O)$ ,  $S(O)_2$ ,  $S(O)_2N(R^{14})$ ,  $N(R^{14})S(O)_2$ , and  $N(R^{14})$ , with the  
 proviso that  $R^{14}$  is selected from other than halo when directly bonded to N  
 and with the further proviso that  $(CR^{37}R^{38})_b$  and  $(CH(R^{14}))_c$  are bonded to  
 $E^0$ ;

$R^{14}$  is selected from the group consisting of hydrido, halo, alkyl, and  
 10 haloalkyl;

$R^{37}$  and  $R^{38}$  are independently selected from the group consisting of  
 hydrido, alkyl, and haloalkyl;

$R^{38}$  is optionally aroyl or heteroaroyl, wherein  $R^{38}$  is optionally  
 substituted with one or more substituents selected from the group consisting of  
 15  $R^{16}$ ,  $R^{17}$ ,  $R^{18}$ , and  $R^{19}$ ;

$Y^0$  is optionally  $Y^{AT}$  wherein  $Y^{AT}$  is  $Q^b-Q^s$ ;

$Y^0$  is optionally  $Q^b-Q^{ss}$  wherein  $Q^{ss}$  is  $(CH(R^{14}))_e-W^2-(CH(R^{15}))_h$ ,

wherein e and h are independently 1 or 2 and  $W^2$  is  $CR^{4a}=CH$  with the  
 proviso that  $(CH(R^{14}))_e$  is bonded to  $E^0$ .

20

3. Compound of Claim 2 or a pharmaceutically acceptable salt thereof, wherein:

B is selected from the group consisting of hydrido, trialkylsilyl, C2-C8  
 alkyl, C3-C8 alkylenyl, C3-C8 alkenyl, C3-C8 alkynyl, and C2-C8 haloalkyl,  
 wherein each member of group B is optionally substituted at any carbon up to

ring or heterocyclyl ring is optionally substituted with one or more of the group consisting of  $R^9$ ,  $R^{10}$ ,  $R^{11}$ ,  $R^{12}$ , and  $R^{13}$ ;

$R^2$  is  $Z^0$ -Q;

$Z^0$  is a bond or  $W^0-(CH(R^{42}))_p$  wherein p is an integer selected from 0

5 through 3 and  $W^0$  is selected from the group consisting of O, S, and  $N(R^{41})$ , with the proviso that  $Z^0$  is directly bonded to the pyridone ring;

$R^{41}$  is selected from the group consisting of hydrido, hydroxy, and alkyl;

$R^{42}$  is selected from the group consisting of amidino, hydrido, hydroxy, amino, and alkyl;

Q is phenyl or a heteroaryl of 5 or 6 ring members, wherein a carbon adjacent to the carbon at the point of attachment of said phenyl or heteroaryl ring to  $Z^0$  is optionally substituted by  $R^9$ , the other carbon adjacent to the

carbon at the point of attachment is optionally substituted by  $R^{13}$ , a carbon adjacent to  $R^9$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{10}$ , a carbon adjacent to  $R^{13}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{12}$ , and any carbon adjacent to both  $R^{10}$  and  $R^{12}$  is optionally substituted by  $R^{11}$ , with the proviso that Q is other than a phenyl when  $Z^0$  is a bond;

20  $R^9$ ,  $R^{10}$ ,  $R^{11}$ ,  $R^{12}$ , and  $R^{13}$  are independently selected from the group consisting of hydrido, acetamido, haloacetamido, alkoxyamino, alkanoyl, haloalkanoyl, amidino, guanidino, alkylenedioxy, haloalkylthio, alkoxy, cycloalkoxy, cycloalkylalkoxy, aralkoxy, aryloxy, heteroaryloxy, heteroaralkoxy, heterocyclyloxy, heterocyclylalkoxy, hydroxy, amino, alkylamino, N-alkyl-N-aryl amino, arylamino, aralkylamino, heteroaryl amino, heteroaralkylamino, heterocyclylamino, heterocyclylalkylamino, alkylthio,



- alkylsulfinyl, arylsulfinyl, aralkylsulfinyl, cycloalkylsulfinyl, heteroarylsulfinyl, alkylsulfamido, alkylsulfonyl, arylsulfonyl, aralkylsulfonyl, cycloalkylsulfonyl, heteroarylsulfonyl, amidosulfonyl, alkyl, aryl, aralkyl, cycloalkyl, cycloalkylalkyl, heteroaryl, heterocyclyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, hydroxyhaloalkyl, aminoalkyl, carboalkoxy, carboxy, carboxyalkyl, carboxamido, and cyano;

K is  $\text{CHR}^{4a}$  wherein  $\text{R}^{4a}$  is selected from the group consisting of hydrido, hydroxyalkyl, alkyl, alkoxyalkyl, alkylthioalkyl, and haloalkyl;

- $\text{E}^0$  is selected from the group consisting of a bond,  $\text{C}(\text{O})\text{N}(\text{H})$ ,  $(\text{H})\text{NC}(\text{O})$ ,  $(\text{R}^7)\text{NS}(\text{O})_2$ , and  $\text{S}(\text{O})_2\text{N}(\text{R}^7)$ ;

- $\text{Y}^0$  is phenyl or a heteroaryl of 5 or 6 ring members, wherein one carbon of said phenyl or said heteroaryl is substituted by  $\text{Q}^s$ , a carbon two or three contiguous atoms from the point of attachment of  $\text{Q}^s$  to the phenyl or heteroaryl ring is substituted by  $\text{Q}^b$ , a carbon adjacent to the point of attachment of  $\text{Q}^s$  is optionally substituted by  $\text{R}^{17}$ , another carbon adjacent to the point of attachment of  $\text{Q}^s$  is optionally substituted by  $\text{R}^{18}$ , a carbon adjacent to  $\text{Q}^b$  is optionally substituted by  $\text{R}^{16}$ , and another carbon adjacent to  $\text{Q}^b$  is optionally substituted by  $\text{R}^{19}$ ;

- $\text{R}^{16}$ ,  $\text{R}^{17}$ ,  $\text{R}^{18}$ , and  $\text{R}^{19}$  are independently selected from the group consisting of hydrido, amidino, guanidino, carboxy, haloalkylthio, alkoxy, hydroxy, amino, alkoxyamino, lower alkylamino, alkylthio, alkylsulfinyl, alkylsulfonyl, alkanoyl, haloalkanoyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, aminoalkyl, and cyano;

- $\text{R}^{16}$  or  $\text{R}^{19}$  is optionally selected from the group consisting of  $\text{NR}^{20}\text{R}^{21}$ ,  $\text{N}(\text{R}^{26})\text{C}(\text{NR}^{25})\text{N}(\text{R}^{23})(\text{R}^{24})$ , and  $\text{C}(\text{NR}^{25})\text{NR}^{23}\text{R}^{24}$ , with the proviso that  $\text{R}^{16}$ ,  $\text{R}^{19}$ , and  $\text{Q}^b$  are not simultaneously hydrido;

$Q^b$  is selected from the group consisting of  $NR^{20}R^{21}$ , hydrido,  $N(R^{26})C(NR^{25})N(R^{23})(R^{24})$ , and  $C(NR^{25})NR^{23}R^{24}$ , with the proviso that no more than one of  $R^{20}$  and  $R^{21}$  is selected from the group consisting of hydroxy, amino, alkylamino, and dialkylamino at the same time and with the further proviso that no more than one of  $R^{23}$  and  $R^{24}$  is selected from the group consisting of hydroxy, amino, alkylamino, and dialkylamino at the same time;

$R^{20}$ ,  $R^{21}$ ,  $R^{23}$ ,  $R^{24}$ ,  $R^{25}$ , and  $R^{26}$  are independently selected from the group consisting of hydrido, alkyl, hydroxy, amino, alkylamino and dialkylamino;

$Q^s$  is selected from the group consisting of a bond,  $(CR^{37}R^{38})_b$  wherein  $b$  is an integer selected from 1 through 3, and  $(CH(R^{14}))_c-W^1-(CH(R^{15}))_d$  wherein  $c$  and  $d$  are independently 1 or 2 and  $W^1$  is selected from the group consisting of  $C(O)N(R^{14})$ ,  $(R^{14})NC(O)$ ,  $S(O)$ ,  $S(O)_2$ ,  $S(O)_2N(R^{14})$ ,  $N(R^{14})S(O)_2$ , and  $N(R^{14})$ , with the proviso that  $R^{14}$  is selected from other than halo when directly bonded to  $N$  and with the further proviso that  $(CR^{37}R^{38})_b$  and  $(CH(R^{14}))_c$  are bonded to  $E^0$ ;

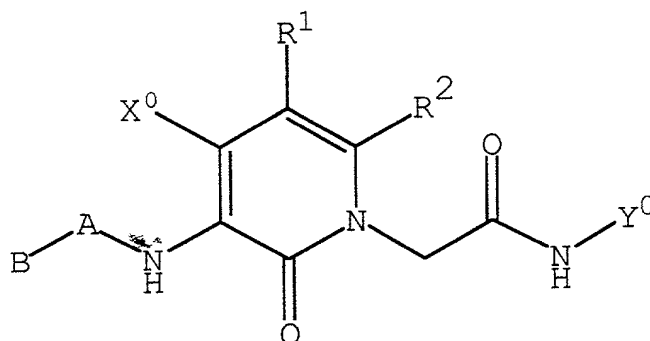
$R^{14}$  is selected from the group consisting of hydrido, halo, alkyl, and haloalkyl;

$R^{37}$  and  $R^{38}$  are independently selected from the group consisting of hydrido, alkyl, and haloalkyl;

$R^{38}$  is optionally aroyl and heteroaroyl;

$Y^0$  is optionally  $Q^b-Q^{ss}$  wherein  $Q^{ss}$  is  $(CH(R^{14}))_e-W^2-(CH(R^{15}))_h$ , wherein  $e$  and  $h$  are integers independently selected from 1 through 2 and  $W^2$  is  $CR^{4a}=CH$  with the proviso that  $(CH(R^{14}))_e$  is bonded to  $E^0$ .

## 4. Compound of Claim 3 of the Formula:



or a pharmaceutically acceptable salt thereof, wherein;

- 5 B is selected from the group consisting of hydrido, trialkylsilyl, C2-C4 alkyl, C3-C5 alkylenyl, C3-C4 alkenyl, C3-C4 alkynyl, and C2-C4 haloalkyl, wherein each member of group B is optionally substituted at any carbon up to and including 3 atoms from the point of attachment of B to A with one or more of the group consisting of  $R^{32}$ ,  $R^{33}$ , and  $R^{34}$ ;

$R^{32}$ ,  $R^{33}$ , and  $R^{34}$  are independently selected from the group

- 10 consisting of hydrido, acetamido, haloacetamido, amidino, guanidino, alkoxy, hydroxy, amino, alkoxyamino, alkylamino, alkylthio, amidosulfonyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, hydroxyhaloalkyl, carboalkoxy, carboxy, carboxamido, and cyano;

A is  $(CH(R^{15}))_{pa}-N(R^7)$  wherein pa is an integer selected from 0

- 15 through 2 and  $R^7$  is selected from the group consisting of hydrido and alkyl;

$R^{15}$  is selected from the group consisting of hydrido, halo, alkyl, and haloalkyl;

- $R^1$  and  $X^0$  are independently from the group consisting of hydrido, alkyl, cyano, halo, haloalkyl, haloalkoxy, amino, aminoalkyl, alkylamino, 20 amidino, hydroxy, hydroxyamino, alkoxy, hydroxyalkyl, alkoxyamino, thiol, and alkylthio;

$R^2$  is  $Z^0-Q$ ;

$Z^0$  is a bond or  $W^0-CH(R^{42})$  wherein  $W^0$  is selected from the group consisting of O, S, and  $N(R^{41})$ ;

$R^{41}$  and  $R^{42}$  are independently hydrido or alkyl;

Q is phenyl or a heteroaryl of 5 or 6 ring members, wherein a carbon adjacent to the carbon at the point of attachment of said phenyl or heteroaryl ring to  $Z^0$  is optionally substituted by  $R^9$ , the other carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^{13}$ , a carbon adjacent to  $R^9$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{10}$ , a carbon adjacent to  $R^{13}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{12}$ , and any carbon adjacent to both  $R^{10}$  and  $R^{12}$  is optionally substituted by  $R^{11}$ , with the proviso that Q is other than a phenyl when  $Z^0$  is a bond;

$R^9$ ,  $R^{11}$ , and  $R^{13}$  are independently selected from the group consisting of hydrido, hydroxy, amino, amidino, guanidino, alkylamino, alkylthio, alkylsulfonamido, alkylsulfinyl, alkylsulfonyl, amidosulfonyl, alkyl, alkoxy, halo, haloalkyl, haloalkoxy, hydroxyalkyl, hydroxyhaloalkyl, carboxy, carboxamido, and cyano;

$R^{10}$  and  $R^{12}$  are independently selected from the group consisting of hydrido, acetamido, haloacetamido, amidino, guanidino, alkyl, aryl, aralkyl, cycloalkyl, cycloalkylalkyl, heteroaryl, heterocyclyl, alkoxy, cycloalkoxy, cycloalkylalkoxy, aralkoxy, aryloxy, heteroaryloxy, heteroaralkoxy, heterocyclyloxy, heterocyclylalkoxy, hydroxy, amino, alkoxyamino, alkylamino, arylamino, aralkylamino, heteroarylamino, heteroaralkylamino, heterocyclylamino, heterocyclylalkylamino, alkylsulfonamido, amidosulfonyl, arylsulfinyl, aralkylsulfinyl, cycloalkylsulfinyl, heteroarylsulfinyl, arylsulfonyl, aralkylsulfonyl, cycloalkylsulfonyl, heteroarylsulfonyl, hydroxyalkyl, hydroxyhaloalkyl,

aminoalkyl, carboalkoxy, carboxy, carboxyalkyl, carboxamido, halo, haloalkyl, and cyano;

$Y^0$  is phenyl or a heteroaryl of 5 or 6 ring members, wherein one carbon of said phenyl or said heteroaryl is substituted by  $Q^s$ , a carbon two or three

- 5 contiguous atoms from the point of attachment of  $Q^s$  to the phenyl or heteroaryl ring is substituted by  $Q^b$ , a carbon adjacent to the point of attachment of  $Q^s$  is optionally substituted by  $R^{17}$ , another carbon adjacent to the point of attachment of  $Q^s$  is optionally substituted by  $R^{18}$ , a carbon adjacent to  $Q^b$  is optionally substituted by  $R^{16}$ , and another carbon adjacent to
- 10  $Q^b$  is optionally substituted by  $R^{19}$ ;

$R^{16}$ ,  $R^{17}$ ,  $R^{18}$ , and  $R^{19}$  are independently selected from the group consisting of hydrido, amidino, guanidino, carboxy, haloalkylthio, alkoxy, hydroxy, amino, alkylamino, alkylthio, alkylsulfinyl, alkylsulfonyl, alkanoyl, haloalkanoyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, aminoalkyl, and

15 cyano;

$R^{16}$  or  $R^{19}$  is optionally selected from the group consisting of  $NR^{20}R^{21}$ ,  $N(R^{26})C(NR^{25})N(R^{23})(R^{24})$ , and  $C(NR^{25})NR^{23}R^{24}$ , with the proviso that  $R^{16}$ ,  $R^{19}$ , and  $Q^b$  are not simultaneously hydrido;

- $Q^b$  is selected from the group consisting of  $NR^{20}R^{21}$ , hydrido,  $C(NR^{25})NR^{23}R^{24}$ , and  $N(R^{26})C(NR^{25})N(R^{23})(R^{24})$ , with the proviso that
- 20 no more than one of  $R^{20}$  and  $R^{21}$  is hydroxy at the same time and with the further proviso that no more than one of  $R^{23}$  and  $R^{24}$  is hydroxy at the same time;

$R^{20}$ ,  $R^{21}$ ,  $R^{23}$ ,  $R^{24}$ ,  $R^{25}$ , and  $R^{26}$  are independently selected from the group consisting of hydrido, alkyl, and hydroxy;

$Q^s$  is selected from the group consisting of a bond,  $CH_2$ , and  $CH_2CH_2$ .

5

5. Compound of Claim 4 or a pharmaceutically acceptable salt thereof, wherein;

B is selected from the group consisting of ethyl, 2-propenyl,

2-propynyl, propyl, isopropyl,  $-CH_2CH_2CH_2-$ ,  $-CH_2CH_2CH_2CH_2-$ , butyl,

2-butenyl, 3-butenyl, 2-butyryl, sec-butyl, tert-butyl, isobutyl,

10 2-methylpropenyl, 2,2,2-trifluoroethyl, 3,3,3-trifluoropropyl, and

2,2-difluoropropyl, wherein each member of group B is optionally substituted at any carbon up to and including 3 atoms from the point of attachment of B to

A with one or more of the group consisting of  $R^{32}$ ,  $R^{33}$ , and  $R^{34}$ ;

$R^{32}$ ,  $R^{33}$ , and  $R^{34}$  are independently selected from the group

15 consisting of hydrido, amidino, guanidino, carboxy, methoxy, ethoxy, isopropoxy, propoxy, hydroxy, amino, methoxyamino, ethoxyamino, acetamido, trifluoroacetamido, N-methylamino, dimethylamino, N-ethylamino, methylthio, ethylthio, isopropylthio, trifluoromethyl, pentafluoroethyl,

20 2,2,2-trifluoroethyl, trifluoromethoxy, 1,1,2,2-tetrafluoroethoxy, fluoro, chloro, bromo, amidosulfonyl, N-methylamidodisulfonyl,

N,N-dimethylamidodisulfonyl, hydroxymethyl, 1-hydroxyethyl,

2-hydroxyethyl, 2,2,2-trifluoro-1-hydroxyethyl, methoxycarbonyl,

ethoxycarbonyl, amidocarbonyl, N-methylamidocarbonyl,

N,N-dimethylamidocarbonyl, and cyano;

25

A is selected from the group consisting of a bond, NH, and  $N(CH_3)$ ;

$R^1$  and  $X^O$  are independently selected from the group consisting of hydrido, hydroxy, amino, amidino, hydroxyamino, aminomethyl, 1-aminoethyl, methylamino, dimethylamino, cyano, methyl, ethyl, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, methoxy, hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl, methoxyamino, methylthio, ethylthio, trifluoromethoxy, 1,1,2,2-tetrafluoroethoxy, fluoro, chloro, and bromo;

30

$R^2$  is  $Z^0$ -Q;

$Z^0$  is selected from the group consisting of a bond, O, S, NH,  $N(CH_3)$ ,  $OCH_2$ ,  $SCH_2$ ,  $N(H)CH_2$ , and  $N(CH_3)CH_2$ ;

- Q is selected from the group consisting of phenyl, 2-thienyl, 3-thienyl,  
 5 2-furyl, 3-furyl, 2-pyrrolyl, 3-pyrrolyl, 2-imidazolyl, 4-imidazolyl,  
 3-pyrazolyl, 4-pyrazolyl, 2-thiazolyl, 3-isoxazolyl, 5-isoxazolyl, 2-pyridyl,  
 3-pyridyl, 4-pyridyl, 2-pyrazinyl, 2-pyrimidinyl, 4-pyrimidinyl,  
 5-pyrimidinyl, 3-pyridazinyl, 4-pyridazinyl, and 1,3,5-triazin-2-yl, wherein a  
 carbon adjacent to the carbon at the point of attachment of said phenyl or  
 10 heteroaryl ring to  $Z^0$  is optionally substituted by  $R^9$ , the other carbon adjacent  
 to the carbon at the point of attachment is optionally substituted by  $R^{13}$ , a  
 carbon adjacent to  $R^9$  and two atoms from the carbon at the point of attachment  
 is optionally substituted by  $R^{10}$ , a carbon adjacent to  $R^{13}$  and two atoms from  
 the carbon at the point of attachment is optionally substituted by  $R^{12}$ , and any  
 15 carbon adjacent to both  $R^{10}$  and  $R^{12}$  is optionally substituted by  $R^{11}$ , with the  
 proviso that Q is other than a phenyl when  $Z^0$  is a bond;

- $R^9$ ,  $R^{11}$ , and  $R^{13}$  are independently selected from the group consisting  
 of hydrido, amidino, guanidino, carboxy, methyl, ethyl, propyl, isopropyl,  
 methoxy, ethoxy, isopropoxy, propoxy, hydroxy, amino, N-methylamino,  
 20 N,N-dimethylamino, N-ethylamino, methylthio, ethylthio, isopropylthio,  
 trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl,  
 2,2,3,3,3-pentafluoropropyl, trifluoromethoxy, 1,1,2,2-tetrafluoroethoxy, fluoro,  
 chloro, bromo, methanesulfonamido, amidosulfonyl,  
 N-methylamidosulfonyl, N,N-dimethylamidosulfonyl, hydroxymethyl,  
 25 1-hydroxyethyl, 2-hydroxyethyl, 2,2,2-trifluoro-1-hydroxyethyl,  
 amidocarbonyl, N-methylamidocarbonyl, N,N-dimethylamidocarbonyl, and  
 cyano;

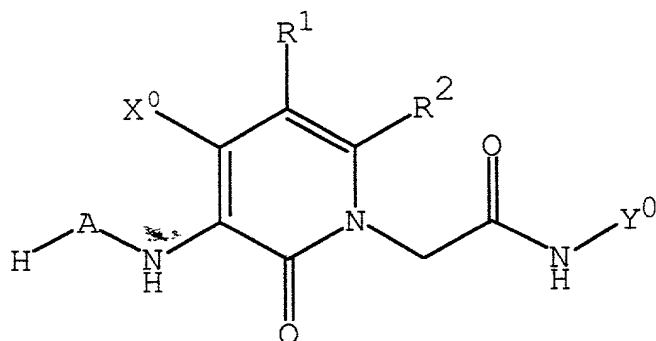
$R^{10}$  and  $R^{12}$  are independently selected from the group consisting of

- hydrido, amidino, guanidino, carboxy, carboxymethyl, methyl, ethyl, propyl, isopropyl, methoxy, ethoxy, isopropoxy, propoxy, hydroxy, amino, methoxyamino, ethoxyamino, acetamido, trifluoroacetamido, aminomethyl,
- 5 1-aminoethyl, 2-aminoethyl, N-methylamino, dimethylamino, N-ethylamino, methanesulfonamido, amidosulfonyl, N-methylamidosulfonyl, N,N-dimethylamidosulfonyl, hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl, 2,2,2-trifluoro-1-hydroxyethyl, methoxycarbonyl, ethoxycarbonyl, amidocarbonyl, N-methylamidocarbonyl,
- 10 N,N-dimethylamidocarbonyl, N-benzylamidocarbonyl, N-(2-chlorobenzyl)amidocarbonyl, N-(3-fluorobenzyl)amidocarbonyl, N-(2-trifluoromethylbenzyl)amidocarbonyl, N-(1-phenylethyl)amidocarbonyl, N-(1-methyl-1-phenylethyl)amidocarbonyl, N-benzylamidosulfonyl, N-(2-chlorobenzyl)amidosulfonyl, N-ethylamidocarbonyl,
- 15 N-isopropylamidocarbonyl, N-propylamidocarbonyl, N-isobutylamidocarbonyl, N-(2-butyl)amidocarbonyl, N-cyclobutylamidocarbonyl, N-cyclopentylamidocarbonyl, N-cyclohexylamidocarbonyl, fluoro, chloro, bromo, cyano, cyclobutoxy, cyclohexoxy, cyclohexylmethoxy, 4-trifluoromethylcyclohexylmethoxy,
- 20 cyclopentoxo, benzyloxy, 4-bromo-3-fluorophenoxy, 3-bromobenzyloxy, 4-bromobenzyloxy, 4-bromobenzylamino, 5-bromopyrid-2-ylmethylamino, 4-butoxyphenamino, 3-chlorobenzyl, 4-chlorophenoxy, 4-chloro-3-ethylphenoxy, 4-chloro-3-ethylbenzylamino, 4-chloro-3-ethylphenylamino, 3-chlorobenzyloxy, 4-chlorobenzyloxy,
- 25 4-chlorobenzylsulfonyl, 4-chlorophenylamino, 4-chlorophenylsulfonyl, 5-chloropyrid-3-yloxy, 2-cyanopyrid-3-yloxy, 2,3-difluorobenzyloxy, 2,4-difluorobenzyloxy, 3,4-difluorobenzyloxy, 2,5-difluorobenzyloxy, 3,5-difluorophenoxy, 3,5-difluorobenzyloxy, 4-difluoromethoxybenzyloxy, 2,3-difluorophenoxy, 2,4-difluorophenoxy, 2,5-difluorophenoxy,
- 30 3,5-dimethylphenoxy, 3,4-dimethylphenoxy, 3,4-dimethylbenzyloxy, 3,5-dimethylbenzyloxy, 4-ethoxyphenoxy, 4-ethylbenzyloxy, 3-ethylphenoxy, 4-ethylaminophenoxy, 3-ethyl-5-methylphenoxy, 4-fluorobenzyloxy, 2-fluoro-3-trifluoromethylbenzyloxy, 3-fluoro-5-trifluoromethylbenzyloxy, 4-fluoro-2-trifluoromethylbenzyloxy, 4-fluoro-3-trifluoromethylbenzyloxy,
- 35 2-fluorophenoxy, 4-fluorophenoxy, 2-fluoro-3-trifluoromethylphenoxy,



- $R^{16}$ ,  $R^{17}$ ,  $R^{18}$ , and  $R^{19}$  are independently selected from the group consisting of hydrido, methyl, ethyl, isopropyl, propyl, carboxy, amidino, guanidino, methoxy, ethoxy, isopropoxy, propoxy, hydroxy, amino, aminomethyl, 1-aminoethyl, 2-aminoethyl, N-methylamino, dimethylamino, N-ethylamino, methylthio, ethylthio, isopropylthio, trifluoromethylthio, methylsulfinyl, ethylsulfinyl, methylsulfonyl, ethylsulfonyl, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, 2,2,3,3,3-pentafluoropropyl, trifluoromethoxy, 1,1,2,2-tetrafluoroethoxy, fluoro, chloro, bromo, hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl, and cyano;
- $R^{16}$  or  $R^{19}$  is optionally selected from the group consisting of  $NR^{20}R^{21}$ ,  $N(R^{26})C(NR^{25})N(R^{23})(R^{24})$ , and  $C(NR^{25})NR^{23}R^{24}$ , with the proviso that  $R^{16}$ ,  $R^{19}$ , and  $Q^b$  are not simultaneously hydrido;
- $Q^b$  is selected from the group consisting of  $NR^{20}R^{21}$ , hydrido,  $C(NR^{25})NR^{23}R^{24}$ , and  $N(R^{26})C(NR^{25})N(R^{23})(R^{24})$ , with the proviso that no more than one of  $R^{20}$ ,  $R^{21}$ ,  $R^{23}$ , and  $R^{24}$  can be hydroxy, when any two of the group consisting of  $R^{20}$ ,  $R^{21}$ ,  $R^{23}$ , and  $R^{24}$  are bonded to the same atom and with the further proviso that said  $Q^b$  group is bonded directly to a carbon atom;
- $R^{20}$ ,  $R^{21}$ ,  $R^{23}$ ,  $R^{24}$ ,  $R^{25}$ , and  $R^{26}$  are independently selected from the group consisting of hydrido, methyl, ethyl, propyl, butyl, isopropyl, and hydroxy;
- $Q^s$  is selected from the group consisting of a bond,  $CH_2$ , and  $CH_2CH_2$ .

## 6. Compound of Claim 4 of the Formula:



or a pharmaceutically acceptable salt thereof, wherein;

A is selected from the group consisting of  $\text{CH}_2\text{N}(\text{CH}_3)$ ,

- 5  $\text{CH}_2\text{N}(\text{CH}_2\text{CH}_3)$ ,  $\text{CH}_2\text{CH}_2\text{N}(\text{CH}_3)$ , and  $\text{CH}_2\text{CH}_2\text{N}(\text{CH}_2\text{CH}_3)$ ;

$\text{R}^1$  and  $\text{X}^0$  are independently selected from the group consisting of hydrido, hydroxy, amino, amidino, hydroxyamino, aminomethyl, 1-aminoethyl, methylamino, dimethylamino, cyano, methyl, ethyl, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, methoxy, hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl, methoxyamino, methylthio, ethylthio, trifluoromethoxy, 1,1,2,2-tetrafluoroethoxy, fluoro, chloro, and bromo;

$\text{R}^2$  is  $\text{Z}^0\text{-Q}$ ;

$\text{Z}^0$  is selected from the group consisting of a bond, O, S, NH,  $\text{N}(\text{CH}_3)$ ,

$\text{OCH}_2$ ,  $\text{SCH}_2$ ,  $\text{N}(\text{H})\text{CH}_2$ , and  $\text{N}(\text{CH}_3)\text{CH}_2$ ;

- 15 Q is selected from the group consisting of phenyl, 2-thienyl, 3-thienyl, 2-furyl, 3-furyl, 2-pyrrolyl, 3-pyrrolyl, 2-imidazolyl, 4-imidazolyl, 3-pyrazolyl, 4-pyrazolyl, 2-thiazolyl, 3-isoxazolyl, 5-isoxazolyl, 2-pyridyl, 3-pyridyl, 4-pyridyl, 2-pyrazinyl, 2-pyrimidinyl, 4-pyrimidinyl, 5-pyrimidinyl, 3-pyridazinyl, 4-pyridazinyl, and 1,3,5-triazin-2-yl, wherein a carbon adjacent to the carbon at the point of attachment of said phenyl or heteroaryl ring to  $\text{Z}^0$  is optionally substituted by  $\text{R}^9$ , the other carbon adjacent to the carbon at the point of attachment is optionally substituted by  $\text{R}^{13}$ , a carbon adjacent to  $\text{R}^9$  and two atoms from the carbon at the point of attachment

is optionally substituted by  $R^{10}$ , a carbon adjacent to  $R^{13}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{12}$ , and any carbon adjacent to both  $R^{10}$  and  $R^{12}$  is optionally substituted by  $R^{11}$ , with the proviso that Q is other than a phenyl when  $Z^0$  is a bond;

- 5  $R^9$ ,  $R^{11}$ , and  $R^{13}$  are independently selected from the group consisting of hydrido, amidino, guanidino, carboxy, methyl, ethyl, propyl, isopropyl, methoxy, ethoxy, isopropoxy, propoxy, hydroxy, amino, N-methylamino, N,N-dimethylamino, N-ethylamino, methylthio, ethylthio, isopropylthio, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl,
- 10 2,2,3,3,3-pentafluoropropyl, trifluoromethoxy, 1,1,2,2-tetrafluoroethoxy, fluoro, chloro, bromo, methanesulfonamido, amidosulfonyl, N-methylamid sulfonyl, N,N-dimethylamid sulfonyl, hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl, 2,2,2-trifluoro-1-hydroxyethyl, amidocarbonyl, N-methylamidocarbonyl, N,N-dimethylamidocarbonyl, and cyano;
- 15  $R^{10}$  and  $R^{12}$  are independently selected from the group consisting of hydrido, amidino, guanidino, carboxy, carboxymethyl, methyl, ethyl, propyl, isopropyl, methoxy, ethoxy, isopropoxy, propoxy, hydroxy, amino, methoxyamino, ethoxyamino, acetamido, trifluoroacetamido, aminomethyl, 1-aminoethyl, 2-aminoethyl, N-methylamino, dimethylamino, N-ethylamino,
- 20 methanesulfonamido, amidosulfonyl, N-methylamid sulfonyl, N,N-dimethylamid sulfonyl, hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl, 2,2,2-trifluoro-1-hydroxyethyl, methoxycarbonyl, ethoxycarbonyl, amidocarbonyl, N-methylamidocarbonyl, N,N-dimethylamidocarbonyl, N-benzylamidocarbonyl,
- 25 N-(2-chlorobenzyl)amidocarbonyl, N-(3-fluorobenzyl)amidocarbonyl, N-(2-trifluoromethylbenzyl)amidocarbonyl, N-(1-phenylethyl)amidocarbonyl, N-(1-methyl-1-phenylethyl)amidocarbonyl, N-benzylamid sulfonyl, N-(2-chlorobenzyl)amid sulfonyl, N-ethylamidocarbonyl, N-isopropylamidocarbonyl, N-propylamidocarbonyl,
- 30 N-isobutylamidocarbonyl, N-(2-butyl)amidocarbonyl, N-cyclobutylamidocarbonyl, N-cyclopentylamidocarbonyl,

- N-cyclohexylamidocarbonyl, fluoro, chloro, bromo, cyano, cyclobutoxy, cyclohexoxy, cyclohexylmethoxy, 4-trifluoromethylcyclohexylmethoxy, cyclopentoxo, benzyl, benzyloxy, 4-bromo-3-fluorophenoxy, 3-bromobenzyloxy, 4-bromobenzyloxy, 4-bromobenzylamino,
- 5 5-bromopyrid-2-ylmethylamino, 4-butoxyphenamino, 3-chlorobenzyl, 4-chlorophenoxy, 4-chloro-3-ethylphenoxy, 4-chloro-3-ethylbenzylamino, 4-chloro-3-ethylphenylamino, 3-chlorobenzyloxy, 4-chlorobenzyloxy, 4-chlorobenzylsulfonyl, 4-chlorophenylamino, 4-chlorophenylsulfonyl, 5-chloropyrid-3-yloxy, 2-cyanopyrid-3-yloxy, 2,3-difluorobenzyloxy,
- 10 2,4-difluorobenzyloxy, 3,4-difluorobenzyloxy, 2,5-difluorobenzyloxy, 3,5-difluorophenoxy, 3,5-difluorobenzyloxy, 4-difluoromethoxybenzyloxy, 2,3-difluorophenoxy, 2,4-difluorophenoxy, 2,5-difluorophenoxy, 3,5-dimethylphenoxy, 3,4-dimethylphenoxy, 3,4-dimethylbenzyloxy, 3,5-dimethylbenzyloxy, 4-ethoxyphenoxy, 4-ethylbenzyloxy, 3-ethylphenoxy,
- 15 4-ethylaminophenoxy, 3-ethyl-5-methylphenoxy, 4-fluorobenzyloxy, 2-fluoro-3-trifluoromethylbenzyloxy, 3-fluoro-5-trifluoromethylbenzyloxy, 4-fluoro-2-trifluoromethylbenzyloxy, 4-fluoro-3-trifluoromethylbenzyloxy, 2-fluorophenoxy, 4-fluorophenoxy, 2-fluoro-3-trifluoromethylphenoxy, 2-fluorobenzyloxy, 4-fluorophenylamino, 2-fluoro-4-trifluoromethylphenoxy,
- 20 4-isopropylbenzyloxy, 3-isopropylphenoxy, 4-isopropylphenoxy, 4-isopropyl-3-methylphenoxy, 4-isopropylbenzyloxy, 3-isopropylphenoxy, 4-isopropylphenoxy, 4-isopropyl-3-methylphenoxy, phenylamino, 1-phenylethoxy, 2-phenylethoxy, 2-phenylethyl, 2-phenylethylamino, phenylsulfonyl, 3-trifluoromethoxybenzyloxy, 4-trifluoromethoxybenzyloxy,
- 25 3-trifluoromethoxyphenoxy, 4-trifluoromethoxyphenoxy, 3-trifluoromethylbenzyloxy, 4-trifluoromethylbenzyloxy, 2,4-bis-trifluoromethylbenzyloxy, 3-trifluoromethylbenzyl, 3,5-bis-trifluoromethylbenzyloxy, 4-trifluoromethylphenoxy, 3-trifluoromethylphenoxy, 3-trifluoromethylthiobenzyloxy,
- 30 4-trifluoromethylthiobenzyloxy, 2,3,4-trifluorophenoxy, 2,3,5-trifluorophenoxy, 3-pentafluoroethylphenoxy, 3-(1,1,2,2-tetrafluoroethoxy)phenoxy, and 3-trifluoromethylthiophenoxy;

$Y^0$  is selected from the group consisting of:

1-Q<sup>b</sup>-4-Q<sup>s</sup>-2-R<sup>16</sup>-3-R<sup>17</sup>-5-R<sup>18</sup>-6-R<sup>19</sup> benzene,

- $2-Q^b-5-Q^s-6-R^{17}-4-R^{18}-3-R^{19}$  pyridine,  
 $3-Q^b-6-Q^s-2-R^{16}-5-R^{18}-4-R^{19}$  pyridine,  $2-Q^b-5-Q^s-3-R^{16}-6-R^{18}$  pyrazine,  
 $3-Q^b-6-Q^s-2-R^{18}-5-R^{18}-4-R^{19}$  pyridazine,  
 $2-Q^b-5-Q^s-4-R^{17}-6-R^{18}$  pyrimidine,  $5-Q^b-2-Q^s-4-R^{16}-6-R^{19}$  pyrimidine,  
5  $3-Q^b-5-Q^s-4-R^{16}-2-R^{19}$  thiophene,  $2-Q^b-5-Q^s-3-R^{16}-4-R^{17}$  thiophene,  
 $3-Q^b-5-Q^s-4-R^{16}-2-R^{19}$  furan,  $2-Q^b-5-Q^s-3-R^{16}-4-R^{17}$  furan,  
 $3-Q^b-5-Q^s-4-R^{16}-2-R^{19}$  pyrrole,  $2-Q^b-5-Q^s-3-R^{16}-4-R^{17}$  pyrrole,  
 $4-Q^b-2-Q^s-5-R^{19}$  imidazole,  $2-Q^b-4-Q^s-5-R^{17}$  imidazole,  
 $3-Q^b-5-Q^s-4-R^{16}$  isoxazole,  $5-Q^b-3-Q^s-4-R^{16}$  isoxazole,  
10  $2-Q^b-5-Q^s-4-R^{16}$  pyrazole,  $4-Q^b-2-Q^s-5-R^{19}$  thiazole, and  
 $2-Q^b-5-Q^s-4-R^{17}$  thiazole;

- $R^{16}$ ,  $R^{17}$ ,  $R^{18}$ , and  $R^{19}$  are independently selected from the group  
consisting of hydrido, methyl, ethyl, isopropyl, propyl, amidino, guanidino,  
methoxy, ethoxy, isopropoxy, propoxy, hydroxy, amino, aminomethyl,  
15 1-aminoethyl, 2-aminoethyl, N-methylamino, dimethylamino, N-ethylamino,  
methylthio, ethylthio, isopropylthio, trifluoromethylthio, methylsulfinyl,  
ethylsulfinyl, methylsulfonyl, ethylsulfonyl, trifluoromethyl, pentafluoroethyl,  
2,2,2-trifluoroethyl, 2,2,3,3,3-pentafluoropropyl, trifluoromethoxy,  
1,1,2,2-tetrafluoroethoxy, fluoro, chloro, bromo, hydroxymethyl,  
20 1-hydroxyethyl, 2-hydroxyethyl, and cyano;

$Q^b$  is selected from the group consisting of  $NR^{20}R^{21}$ ,  
 $C(NR^{25})NR^{23}R^{24}$ , and  $N(R^{26})C(NR^{25})N(R^{23})(R^{24})$ , with the proviso that  
no more than one of  $R^{20}$ ,  $R^{21}$ ,  $R^{23}$ , and  $R^{24}$  can be hydroxy, when any two  
of the group consisting of  $R^{20}$ ,  $R^{21}$ ,  $R^{23}$ , and  $R^{24}$  are bonded to the same

atom and with the further proviso that said  $Q^b$  group is bonded directly to a carbon atom;

- $R^{20}$ ,  $R^{21}$ ,  $R^{23}$ ,  $R^{24}$ ,  $R^{25}$ , and  $R^{26}$  are independently selected from the group consisting of hydrido, methyl, ethyl, propyl, butyl, isopropyl, and hydroxy;

$Q^s$  is selected from the group consisting of a bond,  $CH_2$ , and  $CH_2CH_2$ .

7. Compound of Claim 6 or a pharmaceutically acceptable salt thereof, wherein;

A is selected from the group consisting of  $CH_2N(CH_3)$ ,

- $CH_2N(CH_2CH_3)$ ,  $CH_2CH_2N(CH_3)$ , and  $CH_2CH_2N(CH_2CH_3)$ ;

$R^1$  and  $X^O$  are independently selected from the group consisting of hydrido, hydroxy, amino, amidino, hydroxyamino, aminomethyl, methylamino, cyano, methyl, trifluoromethyl, methoxy, hydroxymethyl, methoxyamino, methylthio, trifluoromethoxy, fluoro, and chloro;

- $R^2$  is  $Z^0-Q$ ;

$Z^0$  is selected from the group consisting of a bond, O, S, NH, and  $N(CH_3)$ ;

Q is selected from the group consisting of

- 3-amidocarbonyl-5-aminophenyl,  
 3-amino-5-(N-benzylamidocarbonyl)phenyl,  
 3-amino-5-benzylphenyl, 3-amino-5-(2-phenylethyl)phenyl,  
 3-amino-5-benzylaminophenyl, 3-amino-5-(2-phenylethylamino)phenyl,  
 3-amino-5-benzyloxyphenyl, 3-amino-5-(2-phenylethoxy)phenyl,  
 3-amino-5-(N-(2-chlorobenzyl)amidocarbonyl)phenyl,  
 3-amino-5-(N-(3-fluorobenzyl)amidocarbonyl)phenyl,  
 3-amino-5-(N-(2-trifluoromethylbenzyl)amidocarbonyl)phenyl,  
 3-amino-5-(N-(1-phenylethyl)amidocarbonyl)phenyl,  
 3-amino-5-(N-(1-methyl-1-phenylethyl)amidocarbonyl)phenyl,  
 3-amino-5-(N-benzylamidosulfonyl)phenyl,  
 3-amino-5-(N-(2-chlorobenzyl)amidosulfonyl)phenyl,  
 3-amino-5-(N-ethylamidocarbonyl)phenyl,

- 3-amino-5-(N-isopropylamidocarbonyl)phenyl,  
 3-amino-5-(N-propylamidocarbonyl)phenyl,  
 3-amino-5-(N-isobutylamidocarbonyl)phenyl,  
 3-amino-5-(N-(2-butyl)amidocarbonyl)phenyl,  
 5 3-amino-5-(N-cyclobutylamidocarbonyl)phenyl,  
 3-amino-5-(N-cyclopentylamidocarbonyl)phenyl,  
 3-amino-5-(N-cyclohexylamidocarbonyl)phenyl, 5-amino-2-fluorophenyl,  
 3-amino-5-hydroxymethylphenyl, 5-amino-3-methoxycarbonylphenyl,  
 3-amidinophenyl, 3-amino-2-methylphenyl, 5-amino-2-methylthiophenyl,  
 10 -aminophenyl, 3-amino-5-(4-trifluoromethylbenzylamino)phenyl,  
 3-amino-5-(4-trifluoromethylbenzyloxy)phenyl, 3-carboxyphenyl,  
 3-carboxy-5-hydroxyphenyl, 3-amino-5-carboxyphenyl, 3-chlorophenyl,  
 2-chlorophenyl, 3-cyanophenyl, 3,5-diaminophenyl, 3-dimethylaminophenyl,  
 2-fluorophenyl, 3-fluorophenyl, 2-hydroxyphenyl, 3-hydroxyphenyl,  
 15 3-methanesulfonylaminophenyl, 2-methoxyphenyl, 3-methoxyphenyl,  
 3-methoxyaminophenyl, 3-methoxycarbonylphenyl, 2-methylaminophenyl,  
 3-methylaminophenyl, 2-methylphenyl, 3-methylphenyl, 4-methylphenyl,  
 phenyl, 3-trifluoroacetamidophenyl, 3-trifluoromethylphenyl,  
 2-trifluoromethylphenyl, 5-amino-2-thienyl, 5-amino-3-thienyl,  
 20 3-bromo-2-thienyl, 3-pyridyl, 4-pyridyl, 2-thienyl, and 3-thienyl, with the  
 proviso that Q is other than a phenyl or a substituted phenyl when Z<sup>0</sup> is a bond;

Y<sup>0</sup> is selected from the group consisting of:

- 1-Q<sup>b</sup>-4-Q<sup>s</sup>-2-R<sup>16</sup>-3-R<sup>17</sup>-5-R<sup>18</sup>-6-R<sup>19</sup> benzene,  
 2-Q<sup>b</sup>-5-Q<sup>s</sup>-6-R<sup>17</sup>-4-R<sup>18</sup>-3-R<sup>19</sup> pyridine,  
 25 3-Q<sup>b</sup>-6-Q<sup>s</sup>-2-R<sup>16</sup>-5-R<sup>18</sup>-4-R<sup>19</sup> pyridine,  
 3-Q<sup>b</sup>-5-Q<sup>s</sup>-4-R<sup>16</sup>-2-R<sup>19</sup> thiophene, and 2-Q<sup>b</sup>-5-Q<sup>s</sup>-3-R<sup>16</sup>-4-R<sup>17</sup> thiophene;

R<sup>16</sup> and R<sup>19</sup> are independently selected from the group consisting of  
 hydrido, amidino, amino, aminomethyl, methoxy, methylamino, hydroxy,  
 hydroxymethyl, fluoro, chloro, and cyano;

- 30 R<sup>17</sup> and R<sup>18</sup> are independently selected from the group consisting of  
 hydrido, fluoro, chloro, hydroxy, hydroxymethyl, amino, carboxy, and cyano;

$Q^b$  is  $C(NR^{25})NR^{23}R^{24}$ ;

$R^{23}$ ,  $R^{24}$ , and  $R^{25}$  are independently hydrido or methyl;

$Q^s$  is  $CH_2$ .

- 5 8. A compound as recited in Claim 7 or a pharmaceutically acceptable salt thereof where said compound is selected from the group consisting of:

N-[[4-aminoiminomethylphenyl]methyl]-2-[1-[6-[3-aminophenoxy]-4-chloro-3-[N,N-dimethylhydrazino]-2-oxo-1(2H)-pyridinyl]]acetamide;

- 10 N-[[4-aminoiminomethylphenyl]methyl]-2-[1-[6-[3-aminophenoxy]-3-[N-ethyl-N-methylhydrazino]-4-fluoro-2-oxo-1(4H)-pyridinyl]]acetamide;

N-[[4-aminoiminomethylphenyl]methyl]-2-[1-[6-[3-aminophenoxy]-3-[N,N-diethylhydrazino]-2-oxo-1(4H)-pyridinyl]]acetamide;

- 15 N-[[4-aminoiminomethylphenyl]methyl]-4-chloro-2-[1-[6-[3,5-diaminophenoxy]-3-[N,N-dimethylhydrazino]-2-oxo-1(2H)-pyridinyl]]acetamide;

N-[[4-aminoiminomethylphenyl]methyl]-2-[1-[6-[3-aminophenylthio]-3-[N,N-dimethylhydrazino]-2-oxo-1(2H)-pyridinyl]]acetamide;

- 20 N-[[4-aminoiminomethylphenyl]methyl]-2-[1-[6-[3-aminophenylthio]-3-[N,N-dimethylhydrazino]-4-fluoro-2-oxo-1(2H)-pyridinyl]]acetamide;

N-[[4-aminoiminomethylphenyl]methyl]-2-[1-[6-[3-amino-5-carboxyphenoxy]-4-chloro-3-[N,N-dimethylhydrazino]-2-oxo-1(2H)-pyridinyl]]acetamide;

- 25 N-[[4-aminoiminomethylphenyl]methyl]-2-[1-[6-[3,5-diaminophenoxy]-3-[N-ethyl-N-methylhydrazino]-4-fluoro-2-oxo-1(4H)-pyridinyl]]acetamide;

N-[[4-aminoiminomethylphenyl]methyl]-2-[1-[6-[3,5-diaminophenoxy]-3-[N,N-diethylhydrazino]-2-oxo-1(4H)-pyridinyl]]acetamide;

- 30 N-[[4-aminoiminomethylphenyl]methyl]-4-chloro-2-[1-[6-[3,5-diaminophenylthio]-3-[N,N-dimethylhydrazino]-2-oxo-1(2H)-pyridinyl]]acetamide;

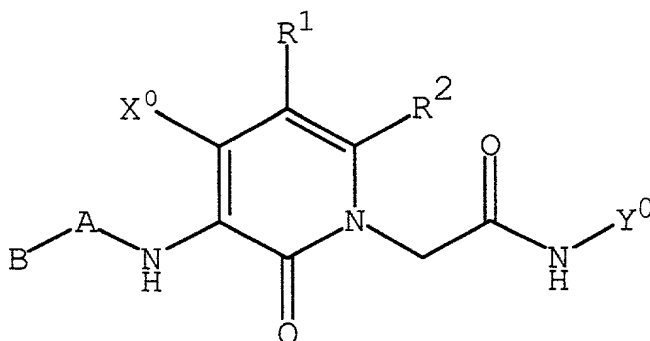


N-[[4-aminoiminomethylphenyl]methyl]-2-[1-[6-[3-amino-5-carboxyphenylthio]-3-[N,N-dimethylhydrazino]-2-oxo-1(2H)-pyridinyl]]acetamide;

5 N-[[4-aminoiminomethylphenyl]methyl]-2-[1-[6-[3-amino-5-carboxyphenylthio]-3-[N,N-dimethylhydrazino]-4-fluoro-2-oxo-1(2H)-pyridinyl]]acetamide.



9. Compound of Claim 2 of the Formula:



10 or a pharmaceutically acceptable salt thereof, wherein;

B is phenyl or a heteroaryl of 5 or 6 ring members, wherein a carbon adjacent to the carbon at the point of attachment of said phenyl or heteroaryl ring to A is optionally substituted by R<sup>32</sup>, the other carbon adjacent to the carbon at the point of attachment is optionally substituted by R<sup>36</sup>, a carbon adjacent to R<sup>32</sup> and two atoms from the carbon at the point of attachment is optionally substituted by R<sup>33</sup>, a carbon adjacent to R<sup>36</sup> and two atoms from the carbon at the point of attachment is optionally substituted by R<sup>35</sup>, and any carbon adjacent to both R<sup>33</sup> and R<sup>35</sup> is optionally substituted by R<sup>34</sup>;

20 R<sup>32</sup>, R<sup>33</sup>, R<sup>34</sup>, R<sup>35</sup>, and R<sup>36</sup> are independently selected from the group consisting of hydrido, acetamido, haloacetamido, amidino, guanidino, alkoxy, hydroxy, amino, alkoxyamino, alkylamino, alkylthio, amidosulfonyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, hydroxyhaloalkyl, carboalkoxy, carboxy, carboxamido, cyano, and Q<sup>b</sup>;

A is a bond or  $(\text{CH}(\text{R}^{15}))_{\text{pa}}-(\text{W}^7)_{\text{rr}}$  wherein rr is 0 or 1, pa is an integer selected from 0 through 3, and  $\text{W}^7$  is  $(\text{R}^7)\text{NC}(\text{O})$  or  $\text{N}(\text{R}^7)$ ;

$\text{R}^7$  is selected from the group consisting of hydrido, hydroxy and alkyl;

$\text{R}^{15}$  is selected from the group consisting of hydrido, halo, alkyl, and haloalkyl;

$\text{R}^1$  and  $\text{X}^0$  are independently selected from the group consisting of hydrido, hydroxy, hydroxyamino, amidino, amino, cyano, hydroxyalkyl, alkoxy, alkyl, alkylamino, aminoalkyl, alkylthio, alkoxyamino, haloalkyl, haloalkoxy, and halo;

$\text{R}^2$  is  $\text{Z}^0\text{-Q}$ ;

$\text{Z}^0$  is a bond or  $\text{W}^0-(\text{CH}(\text{R}^{42}))_{\text{p}}$  wherein p is 0 or 1 and  $\text{W}^0$  is selected from the group consisting of O, S, and  $\text{N}(\text{R}^{41})$ ;

$\text{R}^{41}$  and  $\text{R}^{42}$  are independently hydrido or alkyl;

Q is phenyl or a heteroaryl of 5 or 6 ring members, wherein a carbon adjacent to the carbon at the point of attachment of said phenyl or heteroaryl ring to  $\text{Z}^0$  is optionally substituted by  $\text{R}^9$ , the other carbon adjacent to the carbon at the point of attachment is optionally substituted by  $\text{R}^{13}$ , a carbon adjacent to  $\text{R}^9$  and two atoms from the carbon at the point of attachment is optionally substituted by  $\text{R}^{10}$ , a carbon adjacent to  $\text{R}^{13}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $\text{R}^{12}$ , and any carbon adjacent to both  $\text{R}^{10}$  and  $\text{R}^{12}$  is optionally substituted by  $\text{R}^{11}$ , with the proviso that Q is other than a phenyl when  $\text{Z}^0$  is a bond;

$\text{R}^9$ ,  $\text{R}^{11}$ , and  $\text{R}^{13}$  are independently selected from the group consisting of hydrido, hydroxy, amino, amidino, guanidino, alkylamino, alkylthio, alkylsulfonamido, alkylsulfinyl, alkylsulfonyl, amidosulfonyl, alkyl, alkoxy,

halo, haloalkyl, haloalkoxy, hydroxyalkyl, hydroxyhaloalkyl, carboxy, carboxamido, and cyano;

$R^{10}$  and  $R^{12}$  are independently selected from the group consisting of

hydrido, acetamido, haloacetamido, amidino, guanidino, alkyl, aryl, aralkyl,  
 5 cycloalkyl, cycloalkylalkyl, heteroaryl, heterocyclyl, alkoxy, cycloalkoxy,  
 cycloalkylalkoxy, ~~aralkoxy~~, aryloxy, heteroaryloxy, heteroaralkoxy,  
 heterocyclioxy, heterocyclylalkoxy, hydroxy, amino, alkoxyamino, alkylamino,  
 arylamino, aralkylamino, heteroarylamino, heteroaralkylamino,  
 heterocyclylamino, heterocyclylalkylamino, alkylsulfonamido, amidosulfonyl,  
 10 arylsulfinyl, aralkylsulfinyl, cycloalkylsulfinyl, heteroarylsulfinyl, arylsulfonyl,  
 aralkylsulfonyl, cycloalkylsulfonyl, heteroarylsulfonyl, hydroxyalkyl,  
 hydroxyhaloalkyl, aminoalkyl, carboalkoxy, carboxy, carboxyalkyl,  
 carboxamido, halo, haloalkyl, and cyano;

$Y^0$  is phenyl or a heteroaryl of 5 or 6 ring members, wherein one carbon  
 15 of said phenyl or said heteroaryl is substituted by  $Q^S$ , a carbon two or three  
 contiguous atoms from the point of attachment of  $Q^S$  to the phenyl or  
 heteroaryl ring is substituted by  $Q^b$ , a carbon adjacent to the point of  
 attachment of  $Q^S$  is optionally substituted by  $R^{17}$ , another carbon adjacent to  
 the point of attachment of  $Q^S$  is optionally substituted by  $R^{18}$ , a carbon  
 20 adjacent to  $Q^b$  is optionally substituted by  $R^{16}$ , and another carbon adjacent to  
 $Q^b$  is optionally substituted by  $R^{19}$ ;

$R^{16}$ ,  $R^{17}$ ,  $R^{18}$ , and  $R^{19}$  are independently selected from the group  
 consisting of hydrido, amidino, guanidino, carboxy, haloalkylthio, alkoxy,  
 hydroxy, amino, alkylamino, alkylthio, alkylsulfinyl, alkylsulfonyl, alkanoyl,  
 25 haloalkanoyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, aminoalkyl, and  
 cyano;

$R^{16}$  or  $R^{19}$  is optionally  $NR^{20}R^{21}$  or  $C(NR^{25})NR^{23}R^{24}$ , with the  
 proviso that  $R^{16}$ ,  $R^{19}$ , and  $Q^b$  are not simultaneously hydrido;

$Q^b$  is selected from the group consisting of  $NR^{20}R^{21}$ , hydrido, and  $C(NR^{25})NR^{23}R^{24}$ , with the proviso that no more than one of  $R^{20}$  and  $R^{21}$  is hydroxy at the same time and with the further proviso that no more than one of  $R^{23}$  and  $R^{24}$  is hydroxy at the same time;

- 5  $R^{20}$ ,  $R^{21}$ ,  $R^{23}$ ,  $R^{24}$ , and  $R^{25}$  are independently selected from the group consisting of hydrido, alkyl, and hydroxy;

$Q^s$  is selected from the group consisting of a bond,  $CH_2$ , and  $CH_2CH_2$ .

- 10 10. Compound of Claim 9 or a pharmaceutically acceptable salt thereof, wherein;

- B is selected from the group consisting of phenyl, 2-thienyl, 3-thienyl, 2-furyl, 3-furyl, 2-pyrrolyl, 3-pyrrolyl, 2-imidazolyl, 4-imidazolyl, 3-pyrazolyl, 4-pyrazolyl, 2-thiazolyl, 3-isoxazolyl, 5-isoxazolyl, 2-pyridyl, 3-pyridyl, 4-pyridyl, 2-pyrazinyl, 2-pyrimidinyl, 4-pyrimidinyl, 5-pyrimidinyl, 3-pyridazinyl, 4-pyridazinyl, and 1,3,5-triazin-2-yl, wherein a carbon adjacent to the carbon at the point of attachment of said phenyl or heteroaryl ring to A is optionally substituted by  $R^{32}$ , the other carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^{36}$ , a carbon adjacent to  $R^{32}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{33}$ , a carbon adjacent to  $R^{36}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{35}$ , and any carbon adjacent to both  $R^{33}$  and  $R^{35}$  is optionally substituted by  $R^{34}$ ;

- 25  $R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$  are independently selected from the group consisting of hydrido, amidino, guanidino, carboxy, methoxy, ethoxy,

- isopropoxy, propoxy, hydroxy, amino, methoxyamino, ethoxyamino, acetamido, trifluoroacetamido, N-methylamino, dimethylamino, N-ethylamino, methylthio, ethylthio, isopropylthio, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, 2,2,3,3,3-pentafluoropropyl, trifluoromethoxy,
- 5 1,1,2,2-tetrafluoroethoxy, fluoro, chloro, bromo, amidosulfonyl, N-methylamid sulfonyl, N,N-dimethylamid sulfonyl, hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl, 2,2,2-trifluoro-1-hydroxyethyl, methoxycarbonyl, ethoxycarbonyl, amidocarbonyl, N-methylamidocarbonyl, N,N-dimethylamidocarbonyl, cyano, and  $Q^b$ ;
- 10 A is selected from the group consisting of a bond, NH,  $N(CH_3)$ ,  $N(OH)$ ,  $CH_2$ ,  $CH_3CH$ ,  $CF_3CH$ ,  $NHC(O)$ ,  $N(CH_3)C(O)$ ,  $C(O)NH$ ,  $C(O)N(CH_3)$ ,  $CH_2CH_2$ ,  $CH_2CH_2CH_2$ ,  $CH_3CHCH_2$ , and  $CF_3CHCH_2$ ;
- $R^1$  and  $X^0$  are independently selected from the group consisting of hydrido, hydroxy, amino, amidino, hydroxyamino, aminomethyl, 1-aminoethyl,
- 15 methylamino, dimethylamino, cyano, methyl, ethyl, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, methoxy, hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl, methoxyamino, methylthio, ethylthio, trifluoromethoxy, 1,1,2,2-tetrafluoroethoxy, fluoro, chloro, and bromo;
- $R^2$  is  $Z^0-Q$ ;
- 20  $Z^0$  is selected from the group consisting of a bond, O, S, NH,  $N(CH_3)$ ,  $OCH_2$ ,  $SCH_2$ ,  $N(H)CH_2$ , and  $N(CH_3)CH_2$ ;
- Q is selected from the group consisting of phenyl, 2-thienyl, 3-thienyl, 2-furyl, 3-furyl, 2-pyrrolyl, 3-pyrrolyl, 2-imidazolyl, 4-imidazolyl, 3-pyrazolyl, 4-pyrazolyl, 2-thiazolyl, 3-isoxazolyl, 5-isoxazolyl, 2-pyridyl,
- 25 3-pyridyl, 4-pyridyl, 2-pyrazinyl, 2-pyrimidinyl, 4-pyrimidinyl, 5-pyrimidinyl, 3-pyridazinyl, 4-pyridazinyl, and 1,3,5-triazin-2-yl, wherein a carbon adjacent to the carbon at the point of attachment of said phenyl or heteroaryl ring to  $Z^0$  is optionally substituted by  $R^9$ , the other carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^{13}$ , a

carbon adjacent to  $R^9$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{10}$ , a carbon adjacent to  $R^{13}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{12}$ , and any carbon adjacent to both  $R^{10}$  and  $R^{12}$  is optionally substituted by  $R^{11}$ , with the  
 5 proviso that Q is other than a phenyl when  $Z^0$  is a bond;

$R^9$ ,  $R^{11}$ , and  $R^{13}$  are independently selected from the group consisting of hydrido, amidino, guanidino, carboxy, methyl, ethyl, propyl, isopropyl, methoxy, ethoxy, isopropoxy, propoxy, hydroxy, amino, N-methylamino, N,N-dimethylamino, N-ethylamino, methylthio, ethylthio, isopropylthio,  
 10 trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, 2,2,3,3,3-pentafluoropropyl, trifluoromethoxy, 1,1,2,2-tetrafluoroethoxy, fluoro, chloro, bromo, methanesulfonamido, amidosulfonyl, N-methylamid sulfonyl, N,N-dimethylamid sulfonyl, hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl, 2,2,2-trifluoro-1-hydroxyethyl, amidocarbonyl, N-methylamidocarbonyl,  
 15 N,N-dimethylamidocarbonyl, and cyano;

$R^{10}$  and  $R^{12}$  are independently selected from the group consisting of hydrido, amidino, guanidino, carboxy, carboxymethyl, methyl, ethyl, propyl, isopropyl, methoxy, ethoxy, isopropoxy, propoxy, hydroxy, amino, methoxyamino, ethoxyamino, acetamido, trifluoroacetamido, aminomethyl,  
 20 1-aminoethyl, 2-aminoethyl, N-methylamino, dimethylamino, N-ethylamino, methanesulfonamido, amidosulfonyl, N-methylamid sulfonyl, N,N-dimethylamid sulfonyl, hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl, 2,2,2-trifluoro-1-hydroxyethyl, methoxycarbonyl, ethoxycarbonyl, amidocarbonyl, N-methylamidocarbonyl, N,N-dimethylamidocarbonyl,  
 25 N-benzylamidocarbonyl, N-(2-chlorobenzyl)amidocarbonyl, N-(3-fluorobenzyl)amidocarbonyl, N-(2-trifluoromethylbenzyl)amidocarbonyl, N-(1-phenylethyl)amidocarbonyl, N-(1-methyl-1-phenylethyl)amidocarbonyl, N-benzylamid sulfonyl, N-(2-chlorobenzyl)amid sulfonyl, N-ethylamidocarbonyl, N-isopropylamidocarbonyl, N-propylamidocarbonyl,  
 30 N-isobutylamidocarbonyl, N-(2-butyl)amidocarbonyl, N-cyclobutylamidocarbonyl, N-cyclopentylamidocarbonyl,

- N-cyclohexylamidocarbonyl, fluoro, chloro, bromo, cyano, cyclobutoxy, cyclohexoxy, cyclohexylmethoxy, 4-trifluoromethylcyclohexylmethoxy, cyclopentoxy, benzyl, benzyloxy, 4-bromo-3-fluorophenoxy, 3-bromobenzyloxy, 4-bromobenzyloxy, 4-bromobenzylamino,
- 5 5-bromopyrid-2-ylmethylamino, 4-butoxyphenamino, 3-chlorobenzyl, 4-chlorophenoxy, 4-chloro-3-ethylphenoxy, 4-chloro-3-ethylbenzylamino, 4-chloro-3-ethylphenylamino, 3-chlorobenzyloxy, 4-chlorobenzyloxy, 4-chlorobenzylsulfonyl, 4-chlorophenylamino, 4-chlorophenylsulfonyl, 5-chloropyrid-3-yloxy, 2-cyanopyrid-3-yloxy, 2,3-difluorobenzyloxy,
- 10 2,4-difluorobenzyloxy, 3,4-difluorobenzyloxy, 2,5-difluorobenzyloxy, 3,5-difluorophenoxy, 3,5-difluorobenzyloxy, 4-difluoromethoxybenzyloxy, 2,3-difluorophenoxy, 2,4-difluorophenoxy, 2,5-difluorophenoxy, 3,5-dimethylphenoxy, 3,4-dimethylphenoxy, 3,4-dimethylbenzyloxy, 3,5-dimethylbenzyloxy, 4-ethoxyphenoxy, 4-ethylbenzyloxy, 3-ethylphenoxy,
- 15 4-ethylaminophenoxy, 3-ethyl-5-methylphenoxy, 4-fluorobenzyloxy, 2-fluoro-3-trifluoromethylbenzyloxy, 3-fluoro-5-trifluoromethylbenzyloxy, 4-fluoro-2-trifluoromethylbenzyloxy, 4-fluoro-3-trifluoromethylbenzyloxy, 2-fluorophenoxy, 4-fluorophenoxy, 2-fluoro-3-trifluoromethylphenoxy, 2-fluorobenzyloxy, 4-fluorophenylamino, 2-fluoro-4-trifluoromethylphenoxy,
- 20 4-isopropylbenzyloxy, 3-isopropylphenoxy, 4-isopropylphenoxy, 4-isopropyl-3-methylphenoxy, 4-isopropylbenzyloxy, 3-isopropylphenoxy, 4-isopropylphenoxy, 4-isopropyl-3-methylphenoxy, phenylamino, 1-phenylethoxy, 2-phenylethoxy, 2-phenylethyl, 2-phenylethylamino, phenylsulfonyl, 3-trifluoromethoxybenzyloxy, 4-trifluoromethoxybenzyloxy,
- 25 3-trifluoromethoxyphenoxy, 4-trifluoromethoxyphenoxy, 3-trifluoromethylbenzyloxy, 4-trifluoromethylbenzyloxy, 2,4-bis-trifluoromethylbenzyloxy, 3-trifluoromethylbenzyl, 3,5-bis-trifluoromethylbenzyloxy, 4-trifluoromethylphenoxy, 3-trifluoromethylphenoxy, 3-trifluoromethylthiobenzyloxy,
- 30 4-trifluoromethylthiobenzyloxy, 2,3,4-trifluorophenoxy, 2,3,5-trifluorophenoxy, 3-pentafluoroethylphenoxy, 3-(1,1,2,2-tetrafluoroethoxy)phenoxy, and 3-trifluoromethylthiophenoxy;

$Y^0$  is selected from the group consisting of:

1-Q<sup>b</sup>-4-Q<sup>s</sup>-2-R<sup>16</sup>-3-R<sup>17</sup>-5-R<sup>18</sup>-6-R<sup>19</sup> benzene,

- $2-Q^b-5-Q^s-6-R^{17}-4-R^{18}-3-R^{19}$  pyridine,  
 $3-Q^b-6-Q^s-2-R^{16}-5-R^{18}-4-R^{19}$  pyridine,  $2-Q^b-5-Q^s-3-R^{16}-6-R^{18}$  pyrazine,  
 $3-Q^b-6-Q^s-2-R^{18}-5-R^{18}-4-R^{19}$  pyridazine,  
 $2-Q^b-5-Q^s-4-R^{17}-6-R^{18}$  pyrimidine,  $5-Q^b-2-Q^s-4-R^{16}-6-R^{19}$  pyrimidine,  
5  $3-Q^b-5-Q^s-4-R^{16}-2-R^{19}$  thiophene,  $2-Q^b-5-Q^s-3-R^{16}-4-R^{17}$  thiophene,  
 $3-Q^b-5-Q^s-4-R^{16}-2-R^{19}$  furan,  $2-Q^b-5-Q^s-3-R^{16}-4-R^{17}$  furan,  
 $3-Q^b-5-Q^s-4-R^{16}-2-R^{19}$  pyrrole,  $2-Q^b-5-Q^s-3-R^{16}-4-R^{17}$  pyrrole,  
 $4-Q^b-2-Q^s-5-R^{19}$  imidazole,  $2-Q^b-4-Q^s-5-R^{17}$  imidazole,  
 $3-Q^b-5-Q^s-4-R^{16}$  isoxazole,  $5-Q^b-3-Q^s-4-R^{16}$  isoxazole,  
10  $2-Q^b-5-Q^s-4-R^{16}$  pyrazole,  $4-Q^b-2-Q^s-5-R^{19}$  thiazole, and  
 $2-Q^b-5-Q^s-4-R^{17}$  thiazole;

- $R^{16}$ ,  $R^{17}$ ,  $R^{18}$ , and  $R^{19}$  are independently selected from the group  
 consisting of hydrido, methyl, ethyl, isopropyl, propyl, carboxy, amidino,  
 guanidino, methoxy, ethoxy, isopropoxy, propoxy, hydroxy, amino,  
 15 aminomethyl, 1-aminoethyl, 2-aminoethyl, N-methylamino, dimethylamino,  
 N-ethylamino, methylthio, ethylthio, isopropylthio, trifluoromethylthio,  
 methylsulfinyl, ethylsulfinyl, methylsulfonyl, ethylsulfonyl, trifluoromethyl,  
 pentafluoroethyl, 2,2,2-trifluoroethyl, 2,2,3,3,3-pentafluoropropyl,  
 trifluoromethoxy, 1,1,2,2-tetrafluoroethoxy, fluoro, chloro, bromo,  
 20 hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl, and cyano;

$R^{16}$  or  $R^{19}$  is optionally  $C(NR^{25})NR^{23}R^{24}$  with the proviso that  $R^{16}$ ,  
 $R^{19}$ , and  $Q^b$  are not simultaneously hydrido;

$Q^b$  is  $C(NR^{25})NR^{23}R^{24}$  or hydrido, with the proviso that no more than  
 one of  $R^{23}$  and  $R^{24}$  is hydroxy at the same time;



$R^{23}$ ,  $R^{24}$ , and  $R^{25}$  are independently selected from the group consisting of hydrido, methyl, ethyl, and hydroxy;

$Q^S$  is selected from the group consisting of a bond,  $CH_2$  and  $CH_2CH_2$ .

- 5 11. Compound of Claim 10 or a pharmaceutically acceptable salt thereof, wherein;

B is selected from the group consisting of 2-aminophenyl, 3-aminophenyl, 3-amidinophenyl, 4-amidinophenyl, 3-carboxyphenyl, 3-carboxy-5-hydroxyphenyl, 3-chlorophenyl, 4-chlorophenyl, 10 3,4-dichlorophenyl, 2-fluorophenyl, 3-fluorophenyl, 3,4-difluorophenyl, 3-hydroxyphenyl, 4-hydroxyphenyl, 3-methoxyaminophenyl, 3-methoxyphenyl, 4-methoxyphenyl, 3-methylphenyl, 4-methylphenyl, phenyl, 3-trifluoromethylphenyl, 2-imidazolyl, 2-pyridyl, 3-pyridyl, 5-chloro-3-trifluoromethyl-2-pyridyl, 4-pyridyl, 2-thienyl, 3-thienyl, and 15 3-trifluoromethyl-2-pyridyl;

A is selected from the group consisting of  $CH_2$ ,  $CH_3CH$ ,  $CF_3CH$ ,  $NHC(O)$ ,  $CH_2CH_2$ , and  $CH_2CH_2CH_2$ ;

$R^1$  and  $X^O$  are independently selected from the group consisting of hydrido, hydroxy, amino, amidino, hydroxyamino, aminomethyl, methylamino, 20 cyano, methyl, trifluoromethyl, methoxy, hydroxymethyl, methoxyamino, methylthio, trifluoromethoxy, fluoro, and chloro;

$R^2$  is  $Z^0-Q$ ;

$Z^0$  is selected from the group consisting of a bond, O, S, NH,  $N(CH_3)$ ,  $OCH_2$ , and  $SCH_2$ ;

25 Q is selected from the group consisting of 3-amidocarbonyl-5-aminophenyl, 3-amino-5-(N-benzylamidocarbonyl)phenyl, 3-amino-5-benzylphenyl, 3-amino-5-(2-phenylethyl)phenyl, 3-amino-5-benzylaminophenyl, 3-amino-5-(2-phenylethylamino)phenyl, 3-amino-5-benzylloxyphenyl, 3-amino-5-(2-phenylethoxy)phenyl, 30 3-amino-5-(N-(2-chlorobenzyl)amidocarbonyl)phenyl, 3-amino-5-(N-(3-fluorobenzyl)amidocarbonyl)phenyl,

- 3-amino-5-(N-(2-trifluoromethylbenzyl)amidocarbonyl)phenyl,  
 3-amino-5-(N-(1-phenylethyl)amidocarbonyl)phenyl,  
 3-amino-5-(N-(1-methyl-1-phenylethyl)amidocarbonyl)phenyl,  
 3-amino-5-(N-benzylamidosulfonyl)phenyl,  
 5 3-amino-5-(N-(2-chlorobenzyl)amidosulfonyl)phenyl,  
 3-amino-5-(N-ethylamidocarbonyl)phenyl,  
 3-amino-5-(N-isopropylamidocarbonyl)phenyl,  
 3-amino-5-(N-propylamidocarbonyl)phenyl,  
 3-amino-5-(N-isobutylamidocarbonyl)phenyl,  
 10 3-amino-5-(N-(2-butyl)amidocarbonyl)phenyl,  
 3-amino-5-(N-cyclobutylamidocarbonyl)phenyl,  
 3-amino-5-(N-cyclopentylamidocarbonyl)phenyl,  
 3-amino-5-(N-cyclohexylamidocarbonyl)phenyl, 5-amino-2-fluorophenyl,  
 3-amino-5-hydroxymethylphenyl, 5-amino-3-methoxycarbonylphenyl,  
 15 3-amidinophenyl, 3-amino-2-methylphenyl, 5-amino-2-methylthiophenyl,  
 3-aminophenyl, 3-amino-5-(4-trifluoromethylbenzylamino)phenyl,  
 3-amino-5-(4-trifluoromethylbenzyloxy)phenyl, 3-carboxyphenyl,  
 3-carboxy-5-hydroxyphenyl, 3-amino-5-carboxyphenyl, 3-chlorophenyl,  
 2-chlorophenyl, 3-cyanophenyl, 3,5-diaminophenyl, 3-dimethylaminophenyl,  
 20 2-fluorophenyl, 3-fluorophenyl, 2-hydroxyphenyl, 3-hydroxyphenyl,  
 3-methanesulfonylaminophenyl, 2-methoxyphenyl, 3-methoxyphenyl,  
 3-methoxyaminophenyl, 3-methoxycarbonylphenyl, 2-methylaminophenyl,  
 3-methylaminophenyl, 2-methylphenyl, 3-methylphenyl, 4-methylphenyl,  
 phenyl, 3-trifluoroacetamidophenyl, 3-trifluoromethylphenyl,  
 25 2-trifluoromethylphenyl, 5-amino-2-thienyl, 5-amino-3-thienyl,  
 3-bromo-2-thienyl, 3-pyridyl, 4-pyridyl, 2-thienyl, and 3-thienyl, with the  
 proviso that Q is other than a phenyl or substituted phenyl when Z<sup>0</sup> is a bond;

Y<sup>0</sup> is selected from the group consisting of:

- 1-Q<sup>b</sup>-4-Q<sup>s</sup>-2-R<sup>16</sup>-3-R<sup>17</sup>-5-R<sup>18</sup>-6-R<sup>19</sup> benzene,  
 30 2-Q<sup>b</sup>-5-Q<sup>s</sup>-6-R<sup>17</sup>-4-R<sup>18</sup>-3-R<sup>19</sup> pyridine,  
 3-Q<sup>b</sup>-6-Q<sup>s</sup>-2-R<sup>16</sup>-5-R<sup>18</sup>-4-R<sup>19</sup> pyridine,  
 3-Q<sup>b</sup>-5-Q<sup>s</sup>-4-R<sup>16</sup>-2-R<sup>19</sup> thiophene, and 2-Q<sup>b</sup>-5-Q<sup>s</sup>-3-R<sup>16</sup>-4-R<sup>17</sup> thiophene;

$R^{16}$  and  $R^{19}$  are independently selected from the group consisting of hydrido, amidino, amino, aminomethyl, methoxy, methylamino, hydroxy, hydroxymethyl, fluoro, chloro, and cyano;

$R^{16}$  or  $R^{19}$  is optionally  $C(NR^{25})NR^{23}R^{24}$  with the proviso that  $R^{16}$ ,

5  $R^{19}$ , and  $Q^b$  are not simultaneously hydrido;

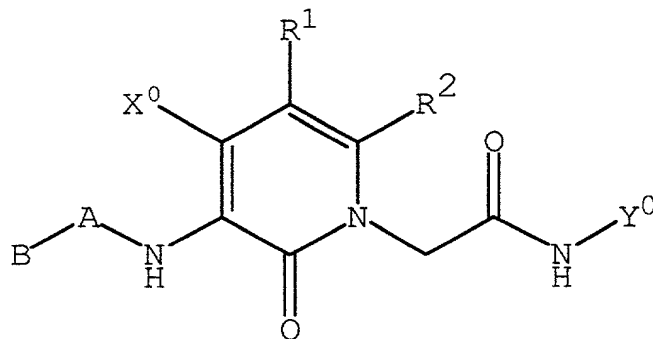
$R^{17}$  and  $R^{18}$  are independently selected from the group consisting of hydrido, fluoro, chloro, hydroxy, hydroxymethyl, amino, carboxy, and cyano;

$Q^b$  is  $C(NR^{25})NR^{23}R^{24}$  or hydrido;

$R^{23}$ ,  $R^{24}$ , and  $R^{25}$  are independently hydrido or methyl;

10  $Q^s$  is  $CH_2$ .

12. Compound of Claim 9 of the Formula:



or a pharmaceutically acceptable salt thereof, wherein;

15 B is phenyl or a heteroaryl of 5 or 6 ring members, wherein a carbon adjacent to the carbon at the point of attachment of said phenyl or heteroaryl ring to A is optionally substituted by  $R^{32}$ , the other carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^{36}$ , a carbon adjacent to  $R^{32}$  and two atoms from the carbon at the point of attachment is

20 optionally substituted by  $R^{33}$ , a carbon adjacent to  $R^{36}$  and two atoms from the

carbon at the point of attachment is optionally substituted by  $R^{35}$ , and any carbon adjacent to both  $R^{33}$  and  $R^{35}$  is optionally substituted by  $R^{34}$ ;

- $R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$  are independently selected from the group consisting of hydrido, acetamido, haloacetamido, amidino, guanidino, alkoxy, hydroxy, amino, alkoxyamino, alkylamino, alkylthio, amidosulfonyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, carboalkoxy, carboxy, carboxamido, cyano, and  $Q^b$ ;

A is a bond or  $(CH(R^{15}))_{pa}-(W^7)_{rr}$  wherein rr is 0 or 1, pa is an integer selected from 0 through 3, and  $W^7$  is  $N(R^7)$ ;

- 10  $R^7$  is hydrido or alkyl;

$R^{15}$  is selected from the group consisting of hydrido, halo, alkyl, and haloalkyl;

- 15  $R^1$  and  $X^O$  are independently selected from the group consisting of hydrido, hydroxy, hydroxyamino, amidino, amino, cyano, hydroxyalkyl, alkoxy, alkyl, alkylamino, aminoalkyl, alkylthio, alkoxyamino, haloalkyl, haloalkoxy, and halo;

$R^2$  is  $Z^0-Q$ ;

$Z^0$  is a bond or  $W^0-(CH_2)_p$  wherein p is 0 or 1 and  $W^0$  is selected from the group consisting of O, S, and  $N(H)$ ;

- 20 Q is phenyl or a heteroaryl of 5 or 6 ring members, wherein a carbon adjacent to the carbon at the point of attachment of said phenyl or heteroaryl ring to  $Z^0$  is optionally substituted by  $R^9$ , the other carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^{13}$ , a carbon adjacent to  $R^9$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{10}$ , a carbon adjacent to  $R^{13}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{12}$ , and any
- 25

carbon adjacent to both  $R^{10}$  and  $R^{12}$  is optionally substituted by  $R^{11}$ , with the proviso that Q is other than a phenyl when  $Z^0$  is a bond;

$R^9$ ,  $R^{11}$ , and  $R^{13}$  are independently selected from the group consisting of hydrido, hydroxy, amino, amidino, guanidino, alkylamino, alkylthio, alkoxy, alkylsulfinyl, alkylsulfonyl, amidosulfonyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, carboxy, carboxamido, and cyano;

$R^{10}$  and  $R^{12}$  are independently selected from the group consisting of hydrido, acetamido, haloacetamido, amidino, guanidino, alkyl, alkoxy, alkoxyamino, hydroxy, amino, alkylamino, alkylsulfonamido, amidosulfonyl, hydroxyalkyl, aminoalkyl, halo, haloalkyl, carboalkoxy, carboxy, carboxamido, carboxyalkyl, and cyano;

$Y^0$  is phenyl or a heteroaryl of 5 or 6 ring members, wherein one carbon of said phenyl or said heteroaryl is substituted by  $Q^s$ , a carbon two or three contiguous atoms from the point of attachment of  $Q^s$  to the phenyl or heteroaryl ring is substituted by  $Q^b$ , a carbon adjacent to the point of attachment of  $Q^s$  is optionally substituted by  $R^{17}$ , another carbon adjacent to the point of attachment of  $Q^s$  is optionally substituted by  $R^{18}$ , a carbon adjacent to  $Q^b$  is optionally substituted by  $R^{16}$ , and another carbon adjacent to  $Q^b$  is optionally substituted by  $R^{19}$ ;

$R^{16}$ ,  $R^{17}$ ,  $R^{18}$ , and  $R^{19}$  are independently selected from the group consisting of hydrido, amidino, guanidino, carboxy, haloalkylthio, alkoxy, hydroxy, amino, alkylamino, alkylthio, alkylsulfinyl, alkylsulfonyl, alkanoyl, haloalkanoyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, aminoalkyl, and cyano;

$R^{16}$  or  $R^{19}$  is optionally  $NR^{20}R^{21}$  or  $C(NR^{25})NR^{23}R^{24}$ , with the proviso that  $R^{16}$ ,  $R^{19}$ , and  $Q^b$  are not simultaneously hydrido;

$Q^b$  is selected from the group consisting of  $NR^{20}R^{21}$ , hydrido, and  $C(NR^{25})NR^{23}R^{24}$ ;

$R^{20}$ ,  $R^{21}$ ,  $R^{23}$ ,  $R^{24}$ , and  $R^{25}$  are independently hydrido or alkyl;

$Q^s$  is  $CH_2$ .

5

13. Compound of Claim 12 or a pharmaceutically acceptable salt thereof, wherein;

B is selected from the group consisting of phenyl, 2-thienyl, 3-thienyl, 2-furyl, 3-furyl, 2-pyrrolyl, 3-pyrrolyl, 2-imidazolyl, 4-imidazolyl, 3-pyrazolyl, 4-pyrazolyl, 2-thiazolyl, 3-isoxazolyl, and 5-isoxazolyl, wherein a carbon adjacent to the carbon at the point of attachment of said phenyl or heteroaryl ring to A is optionally substituted by  $R^{32}$ , the other carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^{36}$ , a carbon adjacent to  $R^{32}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{33}$ , a carbon adjacent to  $R^{36}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{35}$ , and any carbon adjacent to both  $R^{33}$  and  $R^{35}$  is optionally substituted by  $R^{34}$ ;

15

$R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$  are independently selected from the group consisting of hydrido, amidino, guanidino, methyl, ethyl, methoxy, ethoxy, hydroxy, amino, N-methylamino, dimethylamino, methoxyamino, methylthio, ethylthio, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, fluoro, chloro, bromo, amidosulfonyl, N-methylamidodisulfonyl, hydroxymethyl, amidocarbonyl, carboxy, cyano, and  $Q^b$ ;

20

A is selected from the group consisting of a bond, NH,  $N(CH_3)$ ,  $CH_2$ ,  $CH_3CH$ , and  $CH_2CH_2$ ;

25

$X^0$  is selected from the group consisting of hydrido, hydroxy, amino, amidino, aminomethyl, cyano, methyl, trifluoromethyl, hydroxymethyl, chloro, and fluoro;

5  $R^1$  is selected from the group consisting of hydrido, hydroxy, hydroxymethyl, amino, aminomethyl, methylamino, cyano, methyl, trifluoromethyl, methoxy, methylthio, trifluoromethoxy, fluoro, and chloro;

$R^2$  is  $Z^0$ -Q;

$Z^0$  is selected from the group consisting of a bond, O, S, NH,  $OCH_2$ ,  $SCH_2$ , and  $N(H)CH_2$ ;

10 Q is selected from the group consisting of phenyl, 2-thienyl, 2-furyl, 2-pyrrolyl, 2-imidazolyl, 2-thiazolyl, 3-isoxazolyl, 2-pyridyl, and 3-pyridyl, wherein a carbon adjacent to the carbon at the point of attachment of said phenyl or heteroaryl ring to  $Z^0$  is optionally substituted by  $R^9$ , the other carbon adjacent to the carbon at the point of attachment is optionally substituted  
15 by  $R^{13}$ , a carbon adjacent to  $R^9$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{10}$ , a carbon adjacent to  $R^{13}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{12}$ , and any carbon adjacent to both  $R^{10}$  and  $R^{12}$  is optionally substituted by  $R^{11}$ , with the proviso that Q is other than a phenyl when  $Z^0$  is a bond;

20  $R^9$ ,  $R^{11}$ , and  $R^{13}$  are independently selected from the group consisting of hydrido, methyl, ethyl, methoxy, ethoxy, hydroxy, amino, N-methylamino, N,N-dimethylamino, methylthio, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, fluoro, chloro, bromo, amidosulfonyl, N-methylamid sulfonyl, N,N-dimethylamid sulfonyl, hydroxymethyl,  
25 1-hydroxyethyl, amidocarbonyl, N-methylamidocarbonyl, carboxy, and cyano;

$R^{10}$  and  $R^{12}$  are independently selected from the group consisting of hydrido, amidino, amidocarbonyl, N-methylamidocarbonyl, N-benzylamidocarbonyl, N-(2-chlorobenzyl)amidocarbonyl,

- N-(3-fluorobenzyl)amidocarbonyl, N-(2-trifluoromethylbenzyl)amidocarbonyl, N-(1-phenylethyl)amidocarbonyl, N-(1-methyl-1-phenylethyl)amidocarbonyl, N-benzylamidosulfonyl, N-(2-chlorobenzyl)amidosulfonyl, N-ethylamidocarbonyl, N-isopropylamidocarbonyl, N-propylamidocarbonyl,
- 5 N-isobutylamidocarbonyl, N-(2-butyl)amidocarbonyl, N-cyclobutylamidocarbonyl, N-cyclopentylamidocarbonyl, N-cyclohexylamidocarbonyl, guanidino, methyl, ethyl, methoxy, ethoxy, hydroxy, hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl, carboxy, carboxymethyl, amino, acetamido, trifluoromethyl, pentafluoroethyl,
- 10 2,2,2-trifluoroethyl, trifluoroacetamido, aminomethyl, N-methylamino, dimethylamino, methoxyamino, amidosulfonyl, N-methylamidosulfonyl, N,N-dimethylamidosulfonyl, methanesulfonamido, methoxycarbonyl, fluoro, chloro, bromo, and cyano;

$Y^0$  is selected from the group consisting of:

- 15  $1-Q^b-4-Q^s-2-R^{16}-3-R^{17}-5-R^{18}-6-R^{19}$  benzene,  $2-Q^b-5-Q^s-6-R^{17}-4-R^{18}-3-R^{19}$  pyridine,  $2-Q^b-5-Q^s-3-R^{16}-4-R^{17}$  thiophene,  $3-Q^b-6-Q^s-2-R^{16}-5-R^{18}-4-R^{19}$  pyridine,  $3-Q^b-5-Q^s-4-R^{16}-2-R^{19}$  thiophene,  $3-Q^b-5-Q^s-4-R^{16}-2-R^{19}$  furan,  $2-Q^b-5-Q^s-3-R^{16}-4-R^{17}$  furan,  $3-Q^b-5-Q^s-4-R^{16}-2-R^{19}$  pyrrole,  $2-Q^b-5-Q^s-3-R^{16}-4-R^{17}$  pyrrole,
- 20  $4-Q^b-2-Q^s-5-R^{19}$  thiazole, and  $2-Q^b-5-Q^s-4-R^{17}$  thiazole;

- $R^{16}$ ,  $R^{17}$ ,  $R^{18}$ , and  $R^{19}$  are independently selected from the group consisting of hydrido, methyl, ethyl, amidino, guanidino, methoxy, hydroxy, amino, aminomethyl, 1-aminoethyl, 2-aminoethyl, N-methylamino, dimethylamino, methylthio, ethylthio, trifluoromethylthio, methylsulfinyl,
- 25 methylsulfonyl, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, trifluoromethoxy, fluoro, chloro, hydroxymethyl, carboxy, and cyano;

$Q^b$  is  $NR^{20}R^{21}$  or  $C(NR^{25})NR^{23}R^{24}$ ;

$R^{20}$ ,  $R^{21}$ ,  $R^{23}$ ,  $R^{24}$ , and  $R^{25}$  are independently selected from the group consisting of hydrido, methyl, and ethyl;



$Q^s$  is  $CH_2$ .

14. Compound of Claim 13 or a pharmaceutically acceptable salt thereof, wherein;

- 5           B is selected from the group consisting of 2-aminophenyl, 3-aminophenyl, 3-amidinophenyl, 4-amidinophenyl, 3-carboxyphenyl, 3-carboxy-5-hydroxyphenyl, 3-chlorophenyl, 4-chlorophenyl, 3,4-dichlorophenyl, 2-fluorophenyl, 3-fluorophenyl, 3,4-difluorophenyl, 3-hydroxyphenyl, 4-hydroxyphenyl, 3-methoxyaminophenyl, 10 3-methoxyphenyl, 4-methoxyphenyl, 3-methylphenyl, 4-methylphenyl, phenyl, 3-trifluoromethylphenyl, 2-imidazolyl, 2-pyridyl, 3-pyridyl, 5-chloro-3-trifluoromethyl-2-pyridyl, 4-pyridyl, 2-thienyl, 3-thienyl, and 3-trifluoromethyl-2-pyridyl;

A is selected from the group consisting of  $CH_2$  and  $CH_2CH_2$ ;

- 15            $X^O$  is selected from the group consisting of hydrido, hydroxy, amino, amidino, aminomethyl, cyano, methyl, trifluoromethyl, hydroxymethyl, and fluoro;

- $R^1$  is selected from the group consisting of hydrido, hydroxy, hydroxymethyl, amino, aminomethyl, cyano, methyl, trifluoromethyl, and 20 fluoro;

$R^2$  is  $Z^0-Q$ ;

$Z^0$  is selected from the group consisting of a bond, O, S, NH, and  $OCH_2$ ;

- Q is selected from the group consisting of 25 3-amidocarbonyl-5-aminophenyl, 3-amidocarbonyl-5-aminophenyl, 3-amino-5-(N-benzylamidocarbonyl)phenyl, 3-amino-5-(N-(2-chlorobenzyl)amidocarbonyl)phenyl, 3-amino-5-(N-(3-fluorobenzyl)amidocarbonyl)phenyl, 3-amino-5-(N-(2-trifluoromethylbenzyl)amidocarbonyl)phenyl, 30 3-amino-5-(N-(1-phenylethyl)amidocarbonyl)phenyl, 3-amino-5-(N-(1-methyl-1-phenylethyl)amidocarbonyl)phenyl, 3-amino-5-(N-benzylamidosulfonyl)phenyl,

- 3-amino-5-(N-(2-chlorobenzyl)amidossulfonyl)phenyl,  
 3-amino-5-(N-ethylamidocarbonyl)phenyl,  
 3-amino-5-(N-isopropylamidocarbonyl)phenyl,  
 3-amino-5-(N-propylamidocarbonyl)phenyl,  
 5 3-amino-5-(N-isobutylamidocarbonyl)phenyl,  
 3-amino-5-(N-(2-butyl)amidocarbonyl)phenyl,  
 3-amino-5-(N-cyclobutylamidocarbonyl)phenyl,  
 3-amino-5-(N-cyclopentylamidocarbonyl)phenyl,  
 3-amino-5-(N-cyclohexylamidocarbonyl)phenyl, 5-amino-2-fluorophenyl,  
 10 3-amino-5-hydroxymethylphenyl, 5-amino-3-methoxycarbonylphenyl,  
 3-amidinophenyl, 3-amino-2-methylphenyl, 5-amino-2-methylthiophenyl,  
 3-aminophenyl, 3-carboxyphenyl, 3-carboxy-5-aminophenyl,  
 3-carboxy-5-hydroxyphenyl, 3-carboxymethyl-5-aminophenyl,  
 3-carboxymethyl-5-hydroxyphenyl, 3-carboxymethylphenyl, 3-chlorophenyl,  
 15 2-chlorophenyl, 3-cyanophenyl, 3,5-diaminophenyl, 3-dimethylaminophenyl,  
 2-fluorophenyl, 3-fluorophenyl, 2,5-difluorophenyl, 2-hydroxyphenyl,  
 3-hydroxyphenyl, 3-methanesulfonylaminophenyl, 2-methoxyphenyl,  
 3-methoxyphenyl, 3-methoxyaminophenyl, 3-methoxycarbonylphenyl,  
 2-methylaminophenyl, 3-methylaminophenyl, 2-methylphenyl, 3-methylphenyl,  
 20 4-methylphenyl, phenyl, 3-trifluoroacetamidophenyl, 3-trifluoromethylphenyl,  
 2-trifluoromethylphenyl, 5-amino-2-thienyl, 5-amino-3-thienyl,  
 3-bromo-2-thienyl, 3-pyridyl, 4-pyridyl, 2-thienyl, and 3-thienyl, with the  
 proviso that Q is other than a phenyl or a substituted phenyl when  $Z^0$  is a bond;

$Y^0$  is selected from the group consisting of:

- 25 1- $Q^b$ -4- $Q^s$ -2- $R^{16}$ -3- $R^{17}$ -5- $R^{18}$ -6- $R^{19}$  benzene,  
 2- $Q^b$ -5- $Q^s$ -6- $R^{17}$ -4- $R^{18}$ -3- $R^{19}$  pyridine,  
 3- $Q^b$ -6- $Q^s$ -2- $R^{16}$ -5- $R^{18}$ -4- $R^{19}$  pyridine,  
 3- $Q^b$ -5- $Q^s$ -4- $R^{16}$ -2- $R^{19}$  thiophene, and 2- $Q^b$ -5- $Q^s$ -3- $R^{16}$ -4- $R^{17}$  thiophene;

$R^{16}$  and  $R^{19}$  are independently selected from the group consisting of

- 30 hydrido, amidino, amino, aminomethyl, methoxy, methylamino, hydroxy,  
 hydroxymethyl, fluoro, chloro, and cyano;

$R^{17}$  and  $R^{18}$  are independently selected from the group consisting of hydrido, fluoro, chloro, hydroxy, hydroxymethyl, amino, carboxy, and cyano;

$Q^b$  is  $C(NR^{25})NR^{23}R^{24}$ ;

$R^{23}$ ,  $R^{24}$ , and  $R^{25}$  are independently hydrido or methyl;

5  $Q^s$  is  $CH_2$ .

15. Compound of Claim 14 or a pharmaceutically acceptable salt thereof, wherein;

B is selected from the group consisting of 3-aminophenyl,  
10 3-amidinophenyl, 4-amidinophenyl, 3-chlorophenyl, 4-chlorophenyl,  
3,4-dichlorophenyl, 2-fluorophenyl, 4-methylphenyl, phenyl, 2-imidazolyl,  
3-pyridyl, 4-pyridyl, and 3-trifluoromethyl-2-pyridyl;

A is selected from the group consisting of  $CH_2$  and  $CH_2CH_2$ ;

$X^O$  is selected from the group consisting of hydrido, hydroxy, amino,  
15 amidino, aminomethyl, cyano, methyl, trifluoromethyl, hydroxymethyl, and  
fluoro;

$R^1$  is selected from the group consisting of hydrido, hydroxy,  
hydroxymethyl, amino, aminomethyl, cyano, methyl, trifluoromethyl, and  
fluoro;

20  $R^2$  is  $Z^0-Q$ ;

$Z^0$  is selected from the group consisting of a bond, O, S, and NH;

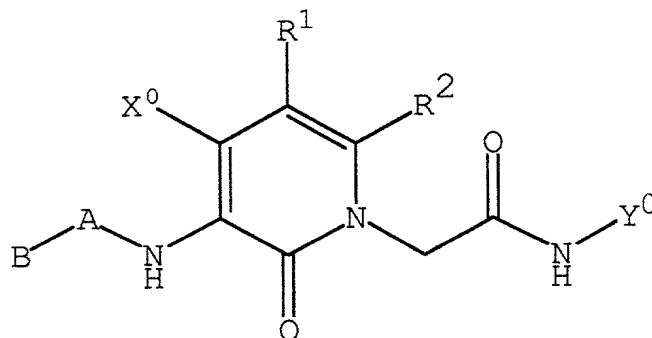
Q is selected from the group consisting of  
3-amidocarbonyl-5-aminophenyl, 3-amino-5-(N-benzylamidocarbonyl)phenyl,  
3-amino-5-(N-(2-chlorobenzyl)amidocarbonyl)phenyl,  
25 3-amino-5-(N-(3-fluorobenzyl)amidocarbonyl)phenyl,  
3-amino-5-(N-(2-trifluoromethylbenzyl)amidocarbonyl)phenyl,  
3-amino-5-(N-(1-phenylethyl)amidocarbonyl)phenyl,  
3-amino-5-(N-(1-methyl-1-phenylethyl)amidocarbonyl)phenyl,  
3-amino-5-(N-benzylamidosulfonyl)phenyl,  
30 3-amino-5-(N-(2-chlorobenzyl)amidosulfonyl)phenyl,  
3-amino-5-(N-ethylamidocarbonyl)phenyl,

- 3-amino-5-(N-isopropylamidocarbonyl)phenyl,  
 3-amino-5-(N-propylamidocarbonyl)phenyl,  
 3-amino-5-(N-isobutylamidocarbonyl)phenyl,  
 3-amino-5-(N-(2-butyl)amidocarbonyl)phenyl,  
 5 3-amino-5-(N-cyclobutylamidocarbonyl)phenyl,  
 3-amino-5-(N-cyclopentylamidocarbonyl)phenyl,  
 3-amino-5-(N-cyclohexylamidocarbonyl)phenyl, 3-aminophenyl,  
 3-carboxy-5-aminophenyl, 3-chlorophenyl, 3,5-diaminophenyl,  
 3-dimethylaminophenyl, 3-hydroxyphenyl, 3-methanesulfonylaminophenyl,  
 10 3-methylaminophenyl, 2-methylphenyl, 3-methylphenyl, phenyl,  
 3-trifluoroacetamidophenyl, 3-bromo-2-thienyl, 2-thienyl, and 3-thienyl, with  
 the proviso that Q is other than a phenyl or a substituted phenyl when  $Z^0$  is a  
 bond;

$Y^0$  is selected from the group consisting of 5-amidino-2-thienylmethyl,

- 15 4-amidinobenzyl, 2-fluoro-4-amidinobenzyl, and 3-fluoro-4-amidinobenzyl.

16. A compound as recited in Claim 9 where said compound is selected from  
 the group of the Formula:



- 20 or a pharmaceutically acceptable salt thereof, wherein;

$R^2$  is 3-aminophenoxy, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^0$  is hydrido;

$R^2$  is 3-aminophenoxy, B is phenyl, A is  $CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^0$  is hydrido;

- 25  $R^2$  is phenylthio, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^0$  is hydrido;

R<sup>2</sup> is 3,4-diamino-2-thienyl, B is phenyl, A is CH<sub>2</sub>CH<sub>2</sub>, Y<sup>0</sup> is 4-amidinobenzyl, R<sup>1</sup> is hydrido, and X<sup>0</sup> is hydrido;

R<sup>2</sup> is phenoxy, B is 3-amidinophenyl, A is CH<sub>2</sub>, Y<sup>0</sup> is 4-amidinobenzyl, R<sup>1</sup> is hydrido, and X<sup>0</sup> is hydrido;

$R^2$  is 3-methylsulfonamido-2-thienyl, B is phenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^0$  is hydrido;

15  $R^2$  is 3-methylaminophenoxy, B is phenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^0$  is hydrido;

R<sup>2</sup> is 3-aminophenylamino, B is phenyl, A is CH<sub>2</sub>, Y<sup>0</sup> is 4-amidinobenzyl,

R<sup>2</sup> is 3-aminophenoxy, B is 3-chlorophenyl, A is CH<sub>2</sub>CH<sub>2</sub>, Y<sup>0</sup> is 4-phenyl, R<sup>1</sup> is amino, and X<sup>0</sup> is hydrido;

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$R^2$  is phenylthio, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is amino, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

5  $R^2$  is 3-amino-2-thienyl, B is phenyl, A is  $CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 3-amidocarbonyl-5-aminophenoxy, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

10  $R^2$  is 3-amino-5-(N-benzylamidocarbonyl)phenoxy, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidocarbonyl)phenoxy, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

15  $R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidosulfonyl)phenoxy, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-trifluoromethylbenzyl)amidocarbonyl)phenoxy, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

20  $R^2$  is 3,5-diaminophenoxy, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxy-2-thienyl, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

25  $R^2$  is 3-amidocarbonyl-5-aminophenylthio, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-benzylamidocarbonyl)-2-thienyl, B is 3-chlorophenyl, A is  $\text{CH}_2\text{CH}_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^0$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidocarbonyl)-2-thienyl, B is 3-chlorophenyl, A is  $\text{CH}_2\text{CH}_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^0$  is hydrido;

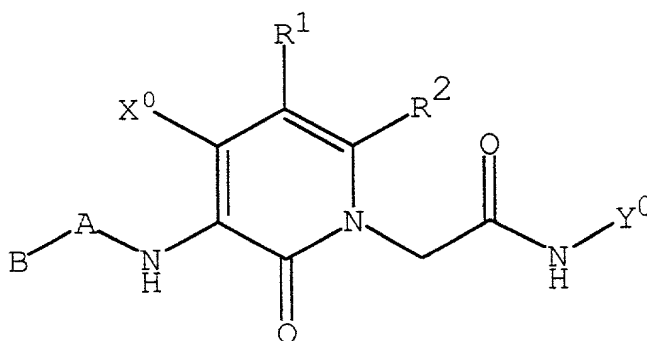
$R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidosulfonyl)-2-thienyl, B is 3-chlorophenyl, A is  $\text{CH}_2\text{CH}_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^0$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-trifluoromethylbenzyl)amidocarbonyl)-2-thienyl, B is 3-chlorophenyl, A is  $\text{CH}_2\text{CH}_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^0$  is hydrido;

$R^2$  is 3,5-diaminophenylamino, B is 3-chlorophenyl, A is  $\text{CH}_2\text{CH}_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^0$  is hydrido;

$R^2$  is 3-amino-5-carboxyphenylamino, B is 3-chlorophenyl, A is  $\text{CH}_2\text{CH}_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^0$  is hydrido.

17. Compound of Claim 2 of the Formula:



or a pharmaceutically acceptable salt thereof, wherein;

B is selected from the group consisting of hydrido, C2-C8 alkyl, C3-C8 alkenyl, C3-C8 alkynyl, and C2-C8 haloalkyl, wherein each member of group B is optionally substituted at any carbon up to and including 6 atoms from the

point of attachment of B to A with one or more of the group consisting of  $R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$ ;

- $R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$  are independently selected from the group consisting of hydrido, acetamido, haloacetamido, amidino, guanidino, alkoxy, hydroxyamino, alkoxyamino, alkylamino, alkylthio, amidosulfonyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, hydroxyhaloalkyl, carboalkoxy, carboxy, carboxamido, cyano, and  $Q^b$ ;

A is a bond or  $(CH(R^{15}))_{pa}-(W^7)_{rr}$  wherein  $rr$  is 0 or 1,  $pa$  is an integer selected from 0 through 3, and  $W^7$  is  $(R^7)NC(O)$  or  $N(R^7)$ ;

- $R^7$  is selected from the group consisting of hydrido, hydroxy and alkyl;

$R^{15}$  is selected from the group consisting of hydrido, halo, alkyl, and haloalkyl;

- $R^1$  and  $X^O$  are independently selected from the group consisting of hydrido, hydroxy, hydroxyamino, amidino, amino, cyano, hydroxyalkyl, alkoxy, alkyl, alkylamino, aminoalkyl, alkylthio, alkoxyamino, haloalkyl, haloalkoxy, and halo;

$R^2$  is  $Z^0-Q$ ;

$Z^0$  is a bond or  $W^0-(CH(R^{42}))_p$  wherein  $p$  is 0 or 1 and  $W^0$  is selected from the group consisting of O, S, and  $N(R^{41})$ ;

- $R^{41}$  and  $R^{42}$  are independently hydrido or alkyl;

Q is phenyl or a heteroaryl of 5 or 6 ring members, wherein a carbon adjacent to the carbon at the point of attachment of said phenyl or heteroaryl ring to  $Z^0$  is optionally substituted by  $R^9$ , the other carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^{13}$ , a carbon

- adjacent to  $R^9$  and two atoms from the carbon at the point of attachment is



optionally substituted by  $R^{10}$ , a carbon adjacent to  $R^{13}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{12}$ , and any carbon adjacent to both  $R^{10}$  and  $R^{12}$  is optionally substituted by  $R^{11}$ , with the proviso that Q is other than a phenyl when  $Z^0$  is a bond;

5  $R^9$ ,  $R^{11}$ , and  $R^{13}$  are independently selected from the group consisting of hydrido, hydroxy, amino, amidino, guanidino, alkylamino, alkylthio, alkylsulfonamido, alkylsulfinyl, alkylsulfonyl, amidosulfonyl, alkyl, alkoxy, halo, haloalkyl, haloalkoxy, hydroxyalkyl, hydroxyhaloalkyl, carboxy, carboxamido, and cyano;

10  $R^{10}$  and  $R^{12}$  are independently selected from the group consisting of hydrido, acetamido, haloacetamido, amidino, guanidino, alkyl, aryl, aralkyl, cycloalkyl, cycloalkylalkyl, heteroaryl, heterocyclyl, alkoxy, cycloalkoxy, cycloalkylalkoxy, aralkoxy, aryloxy, heteroaryloxy, heteroaralkoxy, heterocyclyloxy, heterocyclylalkoxy, hydroxy, amino, alkoxyamino, alkylamino, 15 arylamino, aralkylamino, heteroarylamino, heteroaralkylamino, heterocyclylamino, heterocyclylalkylamino, alkylsulfonamido, amidosulfonyl, arylsulfinyl, aralkylsulfinyl, cycloalkylsulfinyl, heteroarylsulfinyl, arylsulfonyl, aralkylsulfonyl, cycloalkylsulfonyl, heteroarylsulfonyl, hydroxyalkyl, hydroxyhaloalkyl, aminoalkyl, carboalkoxy, carboxy, carboxyalkyl, 20 carboxamido, halo, haloalkyl, and cyano;

$Y^0$  is phenyl or a heteroaryl of 5 or 6 ring members, wherein one carbon of said phenyl or said heteroaryl is substituted by  $Q^s$ , a carbon two or three contiguous atoms from the point of attachment of  $Q^s$  to the phenyl or heteroaryl ring is substituted by  $Q^b$ , a carbon adjacent to the point of 25 attachment of  $Q^s$  is optionally substituted by  $R^{17}$ , another carbon adjacent to the point of attachment of  $Q^s$  is optionally substituted by  $R^{18}$ , a carbon

adjacent to  $Q^b$  is optionally substituted by  $R^{16}$ , and another carbon adjacent to  $Q^b$  is optionally substituted by  $R^{19}$ ;

$R^{16}$ ,  $R^{17}$ ,  $R^{18}$ , and  $R^{19}$  are independently selected from the group consisting of hydrido, amidino, guanidino, carboxy, haloalkylthio, alkoxy, hydroxy, amino, alkylamino, alkylthio, alkylsulfinyl, alkylsulfonyl, alkanoyl, haloalkanoyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, aminoalkyl, and cyano;

$R^{16}$  or  $R^{19}$  is optionally selected from the group consisting of  $NR^{20}R^{21}$ ,  $C(NR^{25})NR^{23}R^{24}$ , and  $N(R^{26})C(NR^{25})N(R^{23})(R^{24})$ , with the

proviso that  $R^{16}$ ,  $R^{19}$ , and  $Q^b$  are not simultaneously hydrido;

$Q^b$  is selected from the group consisting of  $NR^{20}R^{21}$ , hydrido,  $C(NR^{25})NR^{23}R^{24}$ , and  $N(R^{26})C(NR^{25})N(R^{23})(R^{24})$ , with the proviso that no more than one of  $R^{20}$  and  $R^{21}$  is hydroxy at the same time and with the further proviso that no more than one of  $R^{23}$  and  $R^{24}$  is hydroxy at the same time;

$R^{20}$ ,  $R^{21}$ ,  $R^{23}$ ,  $R^{24}$ ,  $R^{25}$ , and  $R^{26}$  are independently selected from the group consisting of hydrido, alkyl, and hydroxy;

$Q^s$  is selected from the group consisting of a bond,  $CH_2$ , and  $CH_2CH_2$ .

18. Compound of Claim 17 or a pharmaceutically acceptable salt thereof, wherein;

B is selected from the group consisting of hydrido, ethyl, 2-propynyl, 2-propenyl, propyl, isopropyl, butyl, 2-butenyl, 3-butenyl, 2-butyryl, sec-butyl, tert-butyl, isobutyl, 2-methylpropenyl, 1-pentyl, 2-pentenyl, 3-pentenyl, 4-pentenyl, 2-pentynyl, 3-pentynyl, 2-pentyl, 1-methyl-2-butenyl, 1-methyl-3-butenyl, 1-methyl-2-butyryl, 3-pentyl, 1-ethyl-2-propenyl,

- 2-methylbutyl, 2-methyl-2-butenyl, 2-methyl-3-butenyl, 2-methyl-3-butyryl,  
 3-methylbutyl, 3-methyl-2-butenyl, 3-methyl-3-butenyl, 1-hexyl, 2-hexenyl,  
 3-hexenyl, 4-hexenyl, 5-hexenyl, 2-hexynyl, 3-hexynyl, 4-hexynyl, 2-hexyl,  
 1-methyl-2-pentenyl, 1-methyl-3-pentenyl, 1-methyl-4-pentenyl,  
 5 1-methyl-2-pentyryl, 1-methyl-3-pentyryl, 3-hexyl, 1-ethyl-2-butenyl,  
 1-ethyl-3-butenyl, 1-propyl-2-propenyl, 1-ethyl-2-butyryl, 1-heptyl, 2-heptenyl,  
 3-heptenyl, 4-heptenyl, 5-heptenyl, 6-heptenyl, 2-heptyryl, 3-heptyryl,  
 4-heptyryl, 5-heptyryl, 2-heptyl, 1-methyl-2-hexenyl, 1-methyl-3-hexenyl,  
 1-methyl-4-hexenyl, 1-methyl-5-hexenyl, 1-methyl-2-hexynyl,  
 10 1-methyl-3-hexynyl, 1-methyl-4-hexynyl, 3-heptyl, 1-ethyl-2-pentenyl,  
 1-ethyl-3-pentenyl, 1-ethyl-4-pentenyl, 1-butyl-2-propenyl, 1-ethyl-2-pentyryl,  
 1-ethyl-3-pentyryl, 2,2,2-trifluoroethyl, 2,2-difluoropropyl,  
 4-trifluoromethyl-5,5,5-trifluoropentyl, 4-trifluoromethylpentyl,  
 5,5,6,6,6-pentafluorohexyl, and 3,3,3-trifluoropropyl, wherein each member of  
 15 group B is optionally substituted at any carbon up to and including 5 atoms  
 from the point of attachment of B to A with one or more of the group  
 consisting of  $R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$ ;

$R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$  are independently selected from the

- group consisting of hydrido, amidino, guanidino, carboxy, methoxy, ethoxy,  
 20 isopropoxy, propoxy, hydroxy, amino, methoxyamino, ethoxyamino, acetamido,  
 trifluoroacetamido, N-methylamino, dimethylamino, N-ethylamino, methylthio,  
 ethylthio, isopropylthio, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl,  
 2,2,3,3,3-pentafluoropropyl, trifluoromethoxy, 1,1,2,2-tetrafluoroethoxy, fluoro,  
 chloro, bromo, amidosulfonyl, N-methylamidulosulfonyl,  
 25 N,N-dimethylamidulosulfonyl, hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl,  
 2,2,2-trifluoro-1-hydroxyethyl, methoxycarbonyl, ethoxycarbonyl,  
 amidocarbonyl, N-methylamidocarbonyl, N,N-dimethylamidocarbonyl, cyano,  
 and  $Q^b$ ;

A is selected from the group consisting of a bond, NH, N(CH<sub>3</sub>),

- 30 N(OH), CH<sub>2</sub>, CH<sub>3</sub>CH, CF<sub>3</sub>CH, NHC(O), N(CH<sub>3</sub>)C(O), C(O)NH,  
 C(O)N(CH<sub>3</sub>), CH<sub>2</sub>CH<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>, CH<sub>3</sub>CHCH<sub>2</sub>, and CF<sub>3</sub>CHCH<sub>2</sub>;

- $R^1$  and  $X^O$  are independently selected from the group consisting of hydrido, hydroxy, amino, amidino, hydroxyamino, aminomethyl, 1-aminoethyl, methylamino, dimethylamino, cyano, methyl, ethyl, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, methoxy, hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl, methoxyamino, methylthio, ethylthio, trifluoromethoxy, 1,1,2,2-tetrafluoroethoxy, fluoro, chloro, and bromo;

$R^2$  is  $Z^0-Q$ ;

$Z^0$  is selected from the group consisting of a bond, O, S, NH,  $N(CH_3)$ ,

$OCH_2$ ,  $SCH_2$ ,  $N(H)CH_2$ , and  $N(CH_3)CH_2$ ;

- Q is selected from the group consisting of phenyl, 2-thienyl, 3-thienyl, 2-furyl, 3-furyl, 2-pyrrolyl, 3-pyrrolyl, 2-imidazolyl, 4-imidazolyl, 3-pyrazolyl, 4-pyrazolyl, 2-thiazolyl, 3-isoxazolyl, 5-isoxazolyl, 2-pyridyl, 3-pyridyl, 4-pyridyl, 2-pyrazinyl, 2-pyrimidinyl, 4-pyrimidinyl, 5-pyrimidinyl, 3-pyridazinyl, 4-pyridazinyl, and 1,3,5-triazin-2-yl, wherein a carbon adjacent to the carbon at the point of attachment of said phenyl or heteroaryl ring to  $Z^0$  is optionally substituted by  $R^9$ , the other carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^{13}$ , a carbon adjacent to  $R^9$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{10}$ , a carbon adjacent to  $R^{13}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{12}$ , and any carbon adjacent to both  $R^{10}$  and  $R^{12}$  is optionally substituted by  $R^{11}$ , with the proviso that Q is other than a phenyl when  $Z^0$  is a bond;

- $R^9$ ,  $R^{11}$ , and  $R^{13}$  are independently selected from the group consisting of hydrido, amidino, guanidino, carboxy, methyl, ethyl, propyl, isopropyl, methoxy, ethoxy, isopropoxy, propoxy, hydroxy, amino, N-methylamino, N,N-dimethylamino, N-ethylamino, methylthio, ethylthio, isopropylthio, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, 2,2,3,3,3-pentafluoropropyl, trifluoromethoxy, 1,1,2,2-tetrafluoroethoxy, fluoro, chloro, bromo, methanesulfonamido, amidosulfonyl, N-methylamidulosulfonyl,

N,N-dimethylamidodisulfonyl, hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl, 2,2,2-trifluoro-1-hydroxyethyl, amidocarbonyl, N-methylamidocarbonyl, N,N-dimethylamidocarbonyl, and cyano;

$R^{10}$  and  $R^{12}$  are independently selected from the group consisting of

- 5 hydrido, amidino, guanidino, carboxy, carboxymethyl, methyl, ethyl, propyl, isopropyl, methoxy, ethoxy, isopropoxy, propoxy, hydroxy, amino, methoxyamino, ethoxyamino, acetamido, trifluoroacetamido, aminomethyl, 1-aminoethyl, 2-aminoethyl, N-methylamino, dimethylamino, N-ethylamino, methanesulfonamido, amidodisulfonyl, N-methylamidodisulfonyl,
- 10 N,N-dimethylamidodisulfonyl, hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl, 2,2,2-trifluoro-1-hydroxyethyl, methoxycarbonyl, ethoxycarbonyl, amidocarbonyl, N-methylamidocarbonyl, N,N-dimethylamidocarbonyl, N-benzylamidocarbonyl, N-(2-chlorobenzyl)amidocarbonyl, N-(3-fluorobenzyl)amidocarbonyl,
- 15 N-(2-trifluoromethylbenzyl)amidocarbonyl, N-(1-phenylethyl)amidocarbonyl, N-(1-methyl-1-phenylethyl)amidocarbonyl, N-benzylamidodisulfonyl, N-(2-chlorobenzyl)amidodisulfonyl, N-ethylamidocarbonyl, N-isopropylamidocarbonyl, N-propylamidocarbonyl, N-isobutylamidocarbonyl, N-(2-butyl)amidocarbonyl,
- 20 N-cyclobutylamidocarbonyl, N-cyclopentylamidocarbonyl, N-cyclohexylamidocarbonyl, fluoro, chloro, bromo, cyano, cyclobutoxy, cyclohexoxy, cyclohexylmethoxy, 4-trifluoromethylcyclohexylmethoxy, cyclopentoxo, benzyloxy, 4-bromo-3-fluorophenoxy, 3-bromobenzyloxy, 4-bromobenzyloxy, 4-bromobenzylamino,
- 25 5-bromopyrid-2-ylmethylamino, 4-butoxyphenamino, 3-chlorobenzyl, 4-chlorophenoxy, 4-chloro-3-ethylphenoxy, 4-chloro-3-ethylbenzylamino, 4-chloro-3-ethylphenylamino, 3-chlorobenzyloxy, 4-chlorobenzyloxy, 4-chlorobenzylsulfonyl, 4-chlorophenylamino, 4-chlorophenylsulfonyl, 5-chloropyrid-3-yloxy, 2-cyanopyrid-3-yloxy, 2,3-difluorobenzyloxy,
- 30 2,4-difluorobenzyloxy, 3,4-difluorobenzyloxy, 2,5-difluorobenzyloxy, 3,5-difluorophenoxy, 3,5-difluorobenzyloxy, 4-difluoromethoxybenzyloxy, 2,3-difluorophenoxy, 2,4-difluorophenoxy, 2,5-difluorophenoxy, 3,5-dimethylphenoxy, 3,4-dimethylphenoxy, 3,4-dimethylbenzyloxy, 3,5-dimethylbenzyloxy, 4-ethoxyphenoxy, 4-ethylbenzyloxy, 3-ethylphenoxy,
- 35 4-ethylaminophenoxy, 3-ethyl-5-methylphenoxy, 4-fluorobenzyloxy,

- 2-fluoro-3-trifluoromethylbenzyloxy, 3-fluoro-5-trifluoromethylbenzyloxy,  
 4-fluoro-2-trifluoromethylbenzyloxy, 4-fluoro-3-trifluoromethylbenzyloxy,  
 2-fluorophenoxy, 4-fluorophenoxy, 2-fluoro-3-trifluoromethylphenoxy,  
 2-fluorobenzyloxy, 4-fluorophenylamino, 2-fluoro-4-trifluoromethylphenoxy,  
 5 4-isopropylbenzyloxy, 3-isopropylphenoxy, 4-isopropylphenoxy,  
 4-isopropyl-3-methylphenoxy, 4-isopropylbenzyloxy, 3-isopropylphenoxy,  
 4-isopropylphenoxy, 4-isopropyl-3-methylphenoxy, phenylamino,  
 1-phenylethoxy, 2-phenylethoxy, 2-phenylethyl, 2-phenylethylamino,  
 phenylsulfonyl, 3-trifluoromethoxybenzyloxy, 4-trifluoromethoxybenzyloxy,  
 10 3-trifluoromethoxyphenoxy, 4-trifluoromethoxyphenoxy,  
 3-trifluoromethylbenzyloxy, 4-trifluoromethylbenzyloxy,  
 2,4-bis-trifluoromethylbenzyloxy, 3-trifluoromethylbenzyl,  
 3,5-bis-trifluoromethylbenzyloxy, 4-trifluoromethylphenoxy,  
 3-trifluoromethylphenoxy, 3-trifluoromethylthiobenzyloxy,  
 15 4-trifluoromethylthiobenzyloxy, 2,3,4-trifluorophenoxy,  
 2,3,5-trifluorophenoxy, 3-pentafluoroethylphenoxy,  
 3-(1,1,2,2-tetrafluoroethoxy)phenoxy, and 3-trifluoromethylthiophenoxy;

$Y^0$  is selected from the group consisting of:

- 1-Q<sup>b</sup>-4-Q<sup>s</sup>-2-R<sup>16</sup>-3-R<sup>17</sup>-5-R<sup>18</sup>-6-R<sup>19</sup> benzene,  
 20 2-Q<sup>b</sup>-5-Q<sup>s</sup>-6-R<sup>17</sup>-4-R<sup>18</sup>-3-R<sup>19</sup> pyridine,  
 3-Q<sup>b</sup>-6-Q<sup>s</sup>-2-R<sup>16</sup>-5-R<sup>18</sup>-4-R<sup>19</sup> pyridine, 2-Q<sup>b</sup>-5-Q<sup>s</sup>-3-R<sup>16</sup>-6-R<sup>18</sup> pyrazine,  
 3-Q<sup>b</sup>-6-Q<sup>s</sup>-2-R<sup>18</sup>-5-R<sup>18</sup>-4-R<sup>19</sup> pyridazine,  
 2-Q<sup>b</sup>-5-Q<sup>s</sup>-4-R<sup>17</sup>-6-R<sup>18</sup> pyrimidine, 5-Q<sup>b</sup>-2-Q<sup>s</sup>-4-R<sup>16</sup>-6-R<sup>19</sup> pyrimidine,  
 3-Q<sup>b</sup>-5-Q<sup>s</sup>-4-R<sup>16</sup>-2-R<sup>19</sup> thiophene, 2-Q<sup>b</sup>-5-Q<sup>s</sup>-3-R<sup>16</sup>-4-R<sup>17</sup> thiophene,  
 25 3-Q<sup>b</sup>-5-Q<sup>s</sup>-4-R<sup>16</sup>-2-R<sup>19</sup> furan, 2-Q<sup>b</sup>-5-Q<sup>s</sup>-3-R<sup>16</sup>-4-R<sup>17</sup> furan,  
 3-Q<sup>b</sup>-5-Q<sup>s</sup>-4-R<sup>16</sup>-2-R<sup>19</sup> pyrrole, 2-Q<sup>b</sup>-5-Q<sup>s</sup>-3-R<sup>16</sup>-4-R<sup>17</sup> pyrrole,  
 4-Q<sup>b</sup>-2-Q<sup>s</sup>-5-R<sup>19</sup> imidazole, 2-Q<sup>b</sup>-4-Q<sup>s</sup>-5-R<sup>17</sup> imidazole,  
 3-Q<sup>b</sup>-5-Q<sup>s</sup>-4-R<sup>16</sup> isoxazole, 5-Q<sup>b</sup>-3-Q<sup>s</sup>-4-R<sup>16</sup> isoxazole,

2-Q<sup>b</sup>-5-Q<sup>s</sup>-4-R<sup>16</sup> pyrazole, 4-Q<sup>b</sup>-2-Q<sup>s</sup>-5-R<sup>19</sup> thiazole, and

2-Q<sup>b</sup>-5-Q<sup>s</sup>-4-R<sup>17</sup> thiazole;

R<sup>16</sup>, R<sup>17</sup>, R<sup>18</sup>, and R<sup>19</sup> are independently selected from the group

consisting of hydrido, methyl, ethyl, isopropyl, propyl, carboxy, amidino,

- 5 guanidino, methoxy, ethoxy, isopropoxy, propoxy, hydroxy, amino, aminomethyl, 1-aminoethyl, 2-aminoethyl, N-methylamino, dimethylamino, N-ethylamino, methylthio, ethylthio, isopropylthio, trifluoromethylthio, methylsulfinyl, ethylsulfinyl, methylsulfonyl, ethylsulfonyl, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, 2,2,3,3,3-pentafluoropropyl, 10 trifluoromethoxy, 1,1,2,2-tetrafluoroethoxy, fluoro, chloro, bromo, hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl, and cyano;

R<sup>16</sup> or R<sup>19</sup> is optionally selected from the group consisting of NR<sup>20</sup>R<sup>21</sup>, C(NR<sup>25</sup>)NR<sup>23</sup>R<sup>24</sup>, and N(R<sup>26</sup>)C(NR<sup>25</sup>)N(R<sup>23</sup>)(R<sup>24</sup>), with the proviso that R<sup>16</sup>, R<sup>19</sup>, and Q<sup>b</sup> are not simultaneously hydrido;

- 15 Q<sup>b</sup> is selected from the group consisting of NR<sup>20</sup>R<sup>21</sup>, hydrido, C(NR<sup>25</sup>)NR<sup>23</sup>R<sup>24</sup>, and N(R<sup>26</sup>)C(NR<sup>25</sup>)N(R<sup>23</sup>)(R<sup>24</sup>), with the proviso that no more than one of R<sup>20</sup> and R<sup>21</sup> is hydroxy at the same time and with the further proviso that no more than one of R<sup>23</sup> and R<sup>24</sup> is hydroxy at the same time;

R<sup>20</sup>, R<sup>21</sup>, R<sup>23</sup>, R<sup>24</sup>, R<sup>25</sup>, and R<sup>26</sup> are independently selected from the

- 20 group consisting of hydrido, methyl, ethyl, propyl, butyl, isopropyl, and hydroxy;

Q<sup>s</sup> is selected from the group consisting of a bond, CH<sub>2</sub>, and CH<sub>2</sub>CH<sub>2</sub>.

19. Compound of Claim 18 or a pharmaceutically acceptable salt thereof, wherein;

- 25 B is selected from the group consisting of hydrido, ethyl, 2-propenyl, 2-propynyl, propyl, isopropyl, butyl, 2-butyl, (R)-2-butyl, (S)-2-butyl, tert-butyl, isobutyl, 1-pentyl, 3-pentyl, 2-methylbutyl, 2,2,2-trifluoroethyl, 6-amidocarbonylhexyl, 4-methyl-2-pentyl, 3-hydroxypropyl,

- 1-methoxy-2-propyl, 2-methoxyethyl, 2-methyl-2-butyl, 3-methyl-2-butyl,  
 2-dimethylaminopropyl, 2-cyanoethyl, 6-hydroxyhexyl, 2-hydroxyethyl,  
 2-amidinoethyl, 2-guanidinoethyl, 3-guanidinopropyl, 4-guanidinobutyl,  
 3-hydroxypropyl, 4-hydroxybutyl, 6-cyanohexyl, 2-dimethylaminoethyl,  
 5 3-methylbutyl, 2-methylbutyl, (S)-2-methylbutyl, 3-aminopropyl, 2-hexyl, and  
 4-aminobutyl;

A is selected from the group consisting of a bond,  $\text{CH}_2$ ,  $\text{NHC(O)}$ ,

$\text{CH}_2\text{CH}_2$ ,  $\text{CH}_2\text{CH}_2\text{CH}_2$ , and  $\text{CH}_3\text{CHCH}_2$ ;

- $\text{R}^1$  and  $\text{X}^0$  are independently selected from the group consisting of  
 10 hydrido, hydroxy, amino, amidino, hydroxyamino, aminomethyl, methylamino,  
 cyano, methyl, trifluoromethyl, methoxy, hydroxymethyl, methoxyamino,  
 methylthio, trifluoromethoxy, fluoro, and chloro;

$\text{R}^2$  is  $\text{Z}^0\text{-Q}$ ;

$\text{Z}^0$  is selected from the group consisting of a bond, O, S, NH,  $\text{N}(\text{CH}_3)$ ,

- 15  $\text{OCH}_2$ , and  $\text{SCH}_2$ ;

Q is selected from the group consisting of

- 3-amidocarbonyl-5-aminophenyl, 3-amino-5-(N-benzylamidocarbonyl)phenyl,  
 3-amino-5-benzylphenyl, 3-amino-5-(2-phenylethyl)phenyl,  
 3-amino-5-benzylaminophenyl, 3-amino-5-(2-phenylethylamino)phenyl,  
 20 3-amino-5-benzyloxyphenyl, 3-amino-5-(2-phenylethoxy)phenyl,  
 3-amino-5-(N-(2-chlorobenzyl)amidocarbonyl)phenyl,  
 3-amino-5-(N-(3-fluorobenzyl)amidocarbonyl)phenyl,  
 3-amino-5-(N-(2-trifluoromethylbenzyl)amidocarbonyl)phenyl,  
 3-amino-5-(N-(1-phenylethyl)amidocarbonyl)phenyl,  
 25 3-amino-5-(N-(1-methyl-1-phenylethyl)amidocarbonyl)phenyl,  
 3-amino-5-(N-benzylamidosulfonyl)phenyl,  
 3-amino-5-(N-(2-chlorobenzyl)amidosulfonyl)phenyl,  
 3-amino-5-(N-ethylamidocarbonyl)phenyl,  
 3-amino-5-(N-isopropylamidocarbonyl)phenyl,  
 30 3-amino-5-(N-propylamidocarbonyl)phenyl,  
 3-amino-5-(N-isobutylamidocarbonyl)phenyl,  
 3-amino-5-(N-(2-butyl)amidocarbonyl)phenyl,



- 3-amino-5-(N-cyclobutylamidocarbonyl)phenyl,  
 3-amino-5-(N-cyclopentylamidocarbonyl)phenyl,  
 3-amino-5-(N-cyclohexylamidocarbonyl)phenyl, 5-amino-2-fluorophenyl,  
 3-amino-5-hydroxymethylphenyl, 5-amino-3-methoxycarbonylphenyl,  
 5 3-amidinophenyl, 3-amino-2-methylphenyl, 5-amino-2-methylthiophenyl,  
 3-aminophenyl, 3-amino-5-(4-trifluoromethylbenzylamino)phenyl,  
 3-amino-5-(4-trifluoromethylbenzyloxy)phenyl, 3-carboxyphenyl,  
 3-carboxy-5-hydroxyphenyl, 3-amino-5-carboxyphenyl, 3-chlorophenyl,  
 2-chlorophenyl, 3-cyanophenyl, 3,5-diaminophenyl, 3-dimethylaminophenyl,  
 10 2-fluorophenyl, 3-fluorophenyl, 2-hydroxyphenyl, 3-hydroxyphenyl,  
 3-methanesulfonylaminophenyl, 2-methoxyphenyl, 3-methoxyphenyl,  
 3-methoxyaminophenyl, 3-methoxycarbonylphenyl, 2-methylaminophenyl,  
 3-methylaminophenyl, 2-methylphenyl, 3-methylphenyl, 4-methylphenyl,  
 phenyl, 3-trifluoroacetamidophenyl, 3-trifluoromethylphenyl,  
 15 2-trifluoromethylphenyl, 5-amino-2-thienyl, 5-amino-3-thienyl,  
 3-bromo-2-thienyl, 3-pyridyl, 4-pyridyl, 2-thienyl, and 3-thienyl, with the  
 proviso that Q is other than a phenyl or substituted phenyl when  $Z^0$  is a bond;

$Y^0$  is selected from the group consisting of:

- 1-Q<sup>b</sup>-4-Q<sup>s</sup>-2-R<sup>16</sup>-3-R<sup>17</sup>-5-R<sup>18</sup>-6-R<sup>19</sup> benzene,  
 20 2-Q<sup>b</sup>-5-Q<sup>s</sup>-6-R<sup>17</sup>-4-R<sup>18</sup>-3-R<sup>19</sup> pyridine,  
 3-Q<sup>b</sup>-6-Q<sup>s</sup>-2-R<sup>16</sup>-5-R<sup>18</sup>-4-R<sup>19</sup> pyridine,  
 3-Q<sup>b</sup>-5-Q<sup>s</sup>-4-R<sup>16</sup>-2-R<sup>19</sup> thiophene, and 2-Q<sup>b</sup>-5-Q<sup>s</sup>-3-R<sup>16</sup>-4-R<sup>17</sup> thiophene;

- R<sup>16</sup> and R<sup>19</sup> are independently selected from the group consisting of  
 hydrido, amidino, amino, aminomethyl, methoxy, methylamino, hydroxy,  
 25 hydroxymethyl, fluoro, chloro, and cyano;

R<sup>16</sup> or R<sup>19</sup> is optionally C(NR<sup>25</sup>)NR<sup>23</sup>R<sup>24</sup> with the proviso that R<sup>16</sup>,

R<sup>19</sup>, and Q<sup>b</sup> are not simultaneously hydrido;

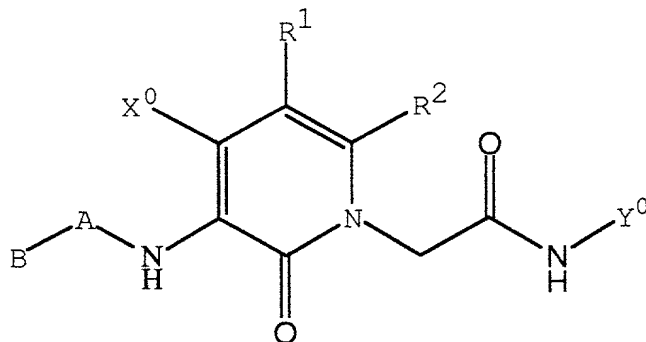
R<sup>17</sup> and R<sup>18</sup> are independently selected from the group consisting of  
 hydrido, fluoro, chloro, hydroxy, hydroxymethyl, amino, carboxy, and cyano;

$Q^b$  is hydrido or  $C(NR^{25})NR^{23}R^{24}$ ;

$R^{23}$ ,  $R^{24}$ , and  $R^{25}$  are independently hydrido or methyl;

$Q^s$  is  $CH_2$ .

5 20. Compound of Claim 17 of the Formula:



or a pharmaceutically acceptable salt thereof, wherein;

B is selected from the group consisting of hydrido, C2-C8 alkyl, C3-C8 alkenyl, C3-C8 alkynyl, and C2-C8 haloalkyl, wherein each member of group B  
10 is optionally substituted at any carbon up to and including 6 atoms from the point of attachment of B to A with one or more of the group consisting of  $R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$ ;

$R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$  are independently selected from the group consisting of hydrido, acetamido, haloacetamido, amidino, guanidino,  
15 alkoxy, hydroxy, amino, alkoxyamino, alkylamino, alkylthio, amidosulfonyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, carboalkoxy, carboxy, carboxamido, cyano, and  $Q^b$ ;

A is a bond or  $(CH(R^{15}))_{pa}-(W^7)_{rr}$  wherein rr is 0 or 1, pa is an integer selected from 0 through 3, and  $W^7$  is  $N(R^7)$ ;

20  $R^7$  is hydrido or alkyl;

$R^{15}$  is selected from the group consisting of hydrido, halo, alkyl, and haloalkyl;

$R^1$  and  $X^O$  are independently selected from the group consisting of hydrido, hydroxy, hydroxyamino, amidino, amino, cyano, hydroxyalkyl, alkoxy, alkyl, alkylamino, aminoalkyl, alkylthio, alkoxyamino, haloalkyl, haloalkoxy, and halo;

$R^2$  is  $Z^0-Q$ ;

$Z^0$  is a bond or  $W^0-(CH_2)_p$  wherein  $p$  is 0 or 1 and  $W^0$  is selected from the group consisting of O, S, and N(H);

$Q$  is phenyl or a heteroaryl of 5 or 6 ring members, wherein a carbon adjacent to the carbon at the point of attachment of said phenyl or heteroaryl ring to  $Z^0$  is optionally substituted by  $R^9$ , the other carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^{13}$ , a carbon adjacent to  $R^9$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{10}$ , a carbon adjacent to  $R^{13}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{12}$ , and any carbon adjacent to both  $R^{10}$  and  $R^{12}$  is optionally substituted by  $R^{11}$ , with the proviso that  $Q$  is other than a phenyl when  $Z^0$  is a bond;

$R^9$ ,  $R^{11}$ , and  $R^{13}$  are independently selected from the group consisting of hydrido, hydroxy, amino, amidino, guanidino, alkylamino, alkylthio, alkoxy, alkylsulfinyl, alkylsulfonyl, amidosulfonyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, carboxy, carboxamido, and cyano;

$R^{10}$  and  $R^{12}$  are independently selected from the group consisting of hydrido, acetamido, haloacetamido, amidino, guanidino, alkyl, alkoxy, alkoxyamino, hydroxy, amino, alkylamino, alkylsulfonamido, amidosulfonyl, hydroxyalkyl, aminoalkyl, halo, haloalkyl, carboalkoxy, carboxy, carboxamido, carboxyalkyl, and cyano;

Y<sup>0</sup> is phenyl or a heteroaryl of 5 or 6 ring members, wherein one carbon of said phenyl or said heteroaryl is substituted by Q<sup>s</sup>, a carbon two or three contiguous atoms from the point of attachment of Q<sup>s</sup> to the phenyl or heteroaryl ring is substituted by Q<sup>b</sup>, a carbon adjacent to the point of attachment of Q<sup>s</sup> is optionally substituted by R<sup>17</sup>, another carbon adjacent to the point of attachment of Q<sup>s</sup> is optionally substituted by R<sup>18</sup>, a carbon adjacent to Q<sup>b</sup> is optionally substituted by R<sup>16</sup>, and another carbon adjacent to Q<sup>b</sup> is optionally substituted by R<sup>19</sup>;

R<sup>16</sup>, R<sup>17</sup>, R<sup>18</sup>, and R<sup>19</sup> are independently selected from the group consisting of hydrido, amidino, guanidino, carboxy, haloalkylthio, alkoxy, hydroxy, amino, alkylamino, alkylthio, alkylsulfinyl, alkylsulfonyl, alkanoyl, haloalkanoyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, aminoalkyl, and cyano;

R<sup>16</sup> or R<sup>19</sup> is optionally selected from the group consisting of NR<sup>20</sup>R<sup>21</sup>, N(R<sup>26</sup>)C(NR<sup>25</sup>)N(R<sup>23</sup>)(R<sup>24</sup>), and C(NR<sup>25</sup>)NR<sup>23</sup>R<sup>24</sup>, with the proviso that R<sup>16</sup>, R<sup>19</sup>, and Q<sup>b</sup> are not simultaneously hydrido;

Q<sup>b</sup> is selected from the group consisting of NR<sup>20</sup>R<sup>21</sup>, hydrido, N(R<sup>26</sup>)C(NR<sup>25</sup>)N(R<sup>23</sup>)(R<sup>24</sup>), and C(NR<sup>25</sup>)NR<sup>23</sup>R<sup>24</sup>;

R<sup>20</sup>, R<sup>21</sup>, R<sup>23</sup>, R<sup>24</sup>, R<sup>25</sup>, and R<sup>26</sup> are independently selected from the group consisting of hydrido and alkyl;

Q<sup>s</sup> is CH<sub>2</sub>.

21. Compound of Claim 20 or a pharmaceutically acceptable salt thereof, wherein;

B is selected from the group consisting of hydrido, ethyl, 2-propenyl,

- 2-propynyl, propyl, isopropyl, butyl, 2-butenyl, 2-butyne, sec-butyl, tert-butyl, isobutyl, 2-methylpropenyl, 1-pentyl, 2-pentenyl, 3-pentenyl, 2-pentyne, 3-pentyne, 2-pentyl, 3-pentyl, 2-methylbutyl, 2-methyl-2-butenyl, 3-methylbutyl, 3-methyl-2-butenyl, 1-hexyl, 2-hexenyl, 3-hexenyl, 4-hexenyl, 2-hexynyl, 3-hexynyl, 4-hexynyl, 2-hexyl, 1-methyl-2-pentenyl, 1-methyl-3-pentenyl, 1-methyl-2-pentyne, 1-methyl-3-pentyne, 3-hexyl, 1-ethyl-2-butenyl, 1-heptyl, 2-heptenyl, 3-heptenyl, 4-heptenyl, 5-heptenyl, 2-heptyne, 3-heptyne, 4-heptyne, 5-heptyne, 2-heptyl, 1-methyl-2-hexenyl, 1-methyl-3-hexenyl, 1-methyl-4-hexenyl, 1-methyl-2-hexynyl, 1-methyl-3-hexynyl, 1-methyl-4-hexynyl, 3-heptyl, 1-ethyl-2-pentenyl, 1-ethyl-3-pentenyl, 1-ethyl-2-pentyne, 1-ethyl-3-pentyne, 2,2,2-trifluoroethyl, 2,2-difluoropropyl, 4-trifluoromethyl-5,5,5-trifluoropentyl, 4-trifluoromethylpentyl, 5,5,6,6,6-pentafluorohexyl, and 3,3,3-trifluoropropyl, wherein each member of group B is optionally substituted at any carbon up to and including 5 atoms from the point of attachment of B to A with one or more of the group consisting of  $R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$ ;

- $R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$  are independently selected from the group consisting of hydrido, amidino, guanidino, methyl, ethyl, methoxy, ethoxy, hydroxy, amino, N-methylamino, dimethylamino, methoxyamino, methylthio, ethylthio, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, fluoro, chloro, bromo, amidosulfonyl, N-methylamidodisulfonyl, hydroxymethyl, amidocarbonyl, carboxy, cyano, and  $Q^b$ ;

- A is selected from the group consisting of a bond, NH,  $N(CH_3)$ ,  $CH_2$ ,  $CH_3CH$ , and  $CH_2CH_2$ ;
- 25 A is optionally selected from the group consisting of  $CH_2N(CH_3)$ ,  $CH_2N(CH_2CH_3)$ ,  $CH_2CH_2N(CH_3)$ , and  $CH_2CH_2N(CH_2CH_3)$  with the proviso that B is hydrido;

- $X^O$  is selected from the group consisting of hydrido, hydroxy, amino, amidino, aminomethyl, cyano, methyl, trifluoromethyl, hydroxymethyl, chloro, and fluoro;
- 30

$R^1$  is selected from the group consisting of hydrido, hydroxy, hydroxymethyl, amino, aminomethyl, methylamino, cyano, methyl, trifluoromethyl, methoxy, methylthio, trifluoromethoxy, fluoro, and chloro;

$R^2$  is  $Z^0$ -Q;

- 5  $Z^0$  is selected from the group consisting of a bond, O, S, NH,  $OCH_2$ ,  $SCH_2$ , and  $N(H)CH_2$ ;

Q is selected from the group consisting of phenyl, 2-thienyl, 2-furyl, 2-pyrrolyl, 2-imidazolyl, 2-thiazolyl, 3-isoxazolyl, 2-pyridyl, and 3-pyridyl, wherein a carbon adjacent to the carbon at the point of attachment of said

- 10 phenyl or heteroaryl ring to  $Z^0$  is optionally substituted by  $R^9$ , the other carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^{13}$ , a carbon adjacent to  $R^9$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{10}$ , a carbon adjacent to  $R^{13}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{12}$ , and any carbon adjacent to both  $R^{10}$  and  $R^{12}$  is optionally substituted by  $R^{11}$ , with the proviso that Q is other than a phenyl when  $Z^0$  is a bond;

- $R^9$ ,  $R^{11}$ , and  $R^{13}$  are independently selected from the group consisting of hydrido, methyl, ethyl, methoxy, ethoxy, hydroxy, amino, N-methylamino, N,N-dimethylamino, methylthio, trifluoromethyl, pentafluoroethyl, 20 2,2,2-trifluoroethyl, fluoro, chloro, bromo, amidosulfonyl, N-methylamidosulfonyl, N,N-dimethylamidosulfonyl, hydroxymethyl, 1-hydroxyethyl, amidocarbonyl, N-methylamidocarbonyl, carboxy, and cyano;

- $R^{10}$  and  $R^{12}$  are independently selected from the group consisting of hydrido, amidino, amidocarbonyl, N-methylamidocarbonyl, 25 N-benzylamidocarbonyl, N-(2-chlorobenzyl)amidocarbonyl, N-(3-fluorobenzyl)amidocarbonyl, N-(2-trifluoromethylbenzyl)amidocarbonyl, N-(1-phenylethyl)amidocarbonyl, N-(1-methyl-1-phenylethyl)amidocarbonyl, N-benzylamidosulfonyl, N-(2-chlorobenzyl)amidosulfonyl,

- N-ethylamidocarbonyl, N-isopropylamidocarbonyl, N-propylamidocarbonyl, N-isobutylamidocarbonyl, N-(2-butyl)amidocarbonyl, N-cyclobutylamidocarbonyl, N-cyclopentylamidocarbonyl, N-cyclohexylamidocarbonyl, guanidino, methyl, ethyl, methoxy, ethoxy, hydroxy, hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl, carboxy, carboxymethyl, amino, acetamido, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, trifluoroacetamido, aminomethyl, N-methylamino, dimethylamino, methoxyamino, amidosulfonyl, N-methylamidosulfonyl, N,N-dimethylamidosulfonyl, methanesulfonamido, methoxycarbonyl, fluoro, chloro, bromo, and cyano;

$Y^0$  is selected from the group consisting of:

- 1-Q<sup>b</sup>-4-Q<sup>s</sup>-2-R<sup>16</sup>-3-R<sup>17</sup>-5-R<sup>18</sup>-6-R<sup>19</sup> benzene,  
 2-Q<sup>b</sup>-5-Q<sup>s</sup>-6-R<sup>17</sup>-4-R<sup>18</sup>-3-R<sup>19</sup> pyridine, 2-Q<sup>b</sup>-5-Q<sup>s</sup>-3-R<sup>16</sup>-4-R<sup>17</sup> thiophene,  
 3-Q<sup>b</sup>-6-Q<sup>s</sup>-2-R<sup>16</sup>-5-R<sup>18</sup>-4-R<sup>19</sup> pyridine, 3-Q<sup>b</sup>-5-Q<sup>s</sup>-4-R<sup>16</sup>-2-R<sup>19</sup> thiophene,  
 3-Q<sup>b</sup>-5-Q<sup>s</sup>-4-R<sup>16</sup>-2-R<sup>19</sup> furan, 2-Q<sup>b</sup>-5-Q<sup>s</sup>-3-R<sup>16</sup>-4-R<sup>17</sup> furan,  
 3-Q<sup>b</sup>-5-Q<sup>s</sup>-4-R<sup>16</sup>-2-R<sup>19</sup> pyrrole, 2-Q<sup>b</sup>-5-Q<sup>s</sup>-3-R<sup>16</sup>-4-R<sup>17</sup> pyrrole,  
 4-Q<sup>b</sup>-2-Q<sup>s</sup>-5-R<sup>19</sup> thiazole, and 2-Q<sup>b</sup>-5-Q<sup>s</sup>-4-R<sup>17</sup> thiazole;

- $R^{16}$ ,  $R^{17}$ ,  $R^{18}$ , and  $R^{19}$  are independently selected from the group consisting of hydrido, methyl, ethyl, amidino, guanidino, methoxy, hydroxy, amino, aminomethyl, 1-aminoethyl, 2-aminoethyl, N-methylamino, dimethylamino, methylthio, ethylthio, trifluoromethylthio, methylsulfinyl, methylsulfonyl, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, trifluoromethoxy, fluoro, chloro, hydroxymethyl, carboxy, and cyano;

- $Q^b$  is selected from the group consisting of  $NR^{20}R^{21}$ ,  $C(NR^{25})NR^{23}R^{24}$ , and  $N(R^{26})C(NR^{25})N(R^{23})(R^{24})$ ;

$R^{20}$ ,  $R^{21}$ ,  $R^{23}$ ,  $R^{24}$ ,  $R^{25}$ , and  $R^{26}$  are independently selected from the group consisting of hydrido, methyl, and ethyl;

$Q^s$  is  $CH_2$ .

22. Compound of Claim 21 or a pharmaceutically acceptable salt thereof,  
wherein;

B is selected from the group consisting of hydrido, ethyl, 2-propenyl,  
2-propynyl, propyl, isopropyl, butyl, 2-butyl, (R)-2-butyl, (S)-2-butyl, tert-butyl,  
5 isobutyl, 1-pentyl, 3-pentyl, 2-methylbutyl, 2,2,2-trifluoroethyl,  
6-amidocarbonylhexyl, 4-methyl-2-pentyl, 3-hydroxypropyl,  
1-methoxy-2-propyl, 2-methoxyethyl, 2-methyl-2-butyl, 3-methyl-2-butyl,  
2-dimethylaminopropyl, 2-cyanoethyl, 6-hydroxyhexyl, 2-hydroxyethyl,  
2-amidinoethyl, 2-guanidinoethyl, 3-guanidinopropyl, 4-guanidinobutyl,  
10 3-hydroxypropyl, 4-hydroxybutyl, 6-cyanoethyl, 2-dimethylaminoethyl,  
3-methylbutyl, 2-methylbutyl, (S)-2-methylbutyl, 3-aminopropyl, 2-hexyl, and  
4-aminobutyl;

A is selected from the group consisting of a bond,  $\text{CH}_2$ ,  $\text{CH}_3\text{CH}$ , and  
 $\text{CH}_2\text{CH}_2$ ;

15  $\text{X}^0$  is selected from the group consisting of hydrido, hydroxy, amino,  
amidino, aminomethyl, cyano, methyl, trifluoromethyl, hydroxymethyl, and  
fluoro;

$\text{R}^1$  is selected from the group consisting of hydrido, hydroxy,  
hydroxymethyl, amino, aminomethyl, cyano, methyl, trifluoromethyl, and  
20 fluoro;

$\text{R}^2$  is  $\text{Z}^0\text{-Q}$ ;

$\text{Z}^0$  is selected from the group consisting of a bond, O, S, NH, and  
 $\text{OCH}_2$ ;

Q is selected from the group consisting of  
25 3-amidocarbonyl-5-aminophenyl, 3-amidocarbonyl-5-aminophenyl,  
3-amino-5-(N-benzylamidocarbonyl)phenyl,  
3-amino-5-(N-(2-chlorobenzyl)amidocarbonyl)phenyl,  
3-amino-5-(N-(3-fluorobenzyl)amidocarbonyl)phenyl,  
3-amino-5-(N-(2-trifluoromethylbenzyl)amidocarbonyl)phenyl,  
30 3-amino-5-(N-(1-phenylethyl)amidocarbonyl)phenyl,  
3-amino-5-(N-(1-methyl-1-phenylethyl)amidocarbonyl)phenyl,  
3-amino-5-(N-benzylamidosulfonyl)phenyl,



- 3-amino-5-(N-(2-chlorobenzyl)amidosulfonyl)phenyl,  
 3-amino-5-(N-ethylamidocarbonyl)phenyl,  
 3-amino-5-(N-isopropylamidocarbonyl)phenyl,  
 3-amino-5-(N-propylamidocarbonyl)phenyl,  
 5 3-amino-5-(N-isobutylamidocarbonyl)phenyl,  
 3-amino-5-(N-(2-butyl)amidocarbonyl)phenyl,  
 3-amino-5-(N-cyclobutylamidocarbonyl)phenyl,  
 3-amino-5-(N-cyclopentylamidocarbonyl)phenyl,  
 3-amino-5-(N-cyclohexylamidocarbonyl)phenyl, 5-amino-2-fluorophenyl,  
 10 3-amino-5-hydroxymethylphenyl, 5-amino-3-methoxycarbonylphenyl,  
 3-amidinophenyl, 3-amino-2-methylphenyl, 5-amino-2-methylthiophenyl,  
 3-aminophenyl, 3-carboxyphenyl, 3-carboxy-5-aminophenyl,  
 3-carboxy-5-hydroxyphenyl, 3-carboxymethyl-5-aminophenyl,  
 3-carboxymethyl-5-hydroxyphenyl, 3-carboxymethylphenyl, 3-chlorophenyl,  
 15 2-chlorophenyl, 3-cyanophenyl, 3,5-diaminophenyl, 3-dimethylaminophenyl,  
 2-fluorophenyl, 3-fluorophenyl, 2,5-difluorophenyl, 2-hydroxyphenyl,  
 3-hydroxyphenyl, 3-methanesulfonylaminophenyl, 2-methoxyphenyl,  
 3-methoxyphenyl, 3-methoxyaminophenyl, 3-methoxycarbonylphenyl,  
 2-methylaminophenyl, 3-methylaminophenyl, 2-methylphenyl, 3-methylphenyl,  
 20 4-methylphenyl, phenyl, 3-trifluoroacetamidophenyl, 3-trifluoromethylphenyl,  
 2-trifluoromethylphenyl, 5-amino-2-thienyl, 5-amino-3-thienyl,  
 3-bromo-2-thienyl, 3-pyridyl, 4-pyridyl, 2-thienyl, and 3-thienyl, with the  
 proviso that Q is other than a phenyl or a substituted phenyl when  $Z^0$  is a bond;

$Y^0$  is selected from the group consisting of:

- 25 1- $Q^b$ -4- $Q^s$ -2- $R^{16}$ -3- $R^{17}$ -5- $R^{18}$ -6- $R^{19}$  benzene,  
 2- $Q^b$ -5- $Q^s$ -6- $R^{17}$ -4- $R^{18}$ -3- $R^{19}$  pyridine,  
 3- $Q^b$ -6- $Q^s$ -2- $R^{16}$ -5- $R^{18}$ -4- $R^{19}$  pyridine,  
 3- $Q^b$ -5- $Q^s$ -4- $R^{16}$ -2- $R^{19}$  thiophene, and 2- $Q^b$ -5- $Q^s$ -3- $R^{16}$ -4- $R^{17}$  thiophene;

$R^{16}$  and  $R^{19}$  are independently selected from the group consisting of

- 30 hydrido, amidino, amino, aminomethyl, methoxy, methylamino, hydroxy,  
 hydroxymethyl, fluoro, chloro, and cyano;

$R^{17}$  and  $R^{18}$  are independently selected from the group consisting of hydrido, fluoro, chloro, hydroxy, hydroxymethyl, amino, carboxy, and cyano;

$Q^b$  is  $C(NR^{25})NR^{23}R^{24}$ ;

$R^{23}$ ,  $R^{24}$ , and  $R^{25}$  are independently selected from the group consisting of

5 hydrido and methyl;

$Q^s$  is  $CH_2$ .

23. Compound of Claim 22 or a pharmaceutically acceptable salt thereof, wherein;

10 B is selected from the group consisting of hydrido, ethyl, 2-propenyl, 2-propynyl, propyl, isopropyl, butyl, 2-butyl, (R)-2-butyl, (S)-2-butyl, tert-butyl, isobutyl, 1-pentyl, 3-pentyl, 2-methylbutyl, 2,2,2-trifluoroethyl, 6-amidocarbonylhexyl, 4-methyl-2-pentyl, 3-hydroxypropyl, 1-methoxy-2-propyl, 2-methoxyethyl, 2-methyl-2-butyl, 3-methyl-2-butyl, 15 2-dimethylaminopropyl, 2-cyanoethyl, 6-hydroxyhexyl, 2-hydroxyethyl, 2-amidinoethyl, 2-guanidinoethyl, 3-guanidinopropyl, 4-guanidinobutyl, 3-hydroxypropyl, 4-hydroxybutyl, 6-cyanoethyl, 2-dimethylaminoethyl, 3-methylbutyl, 2-methylbutyl, (S)-2-methylbutyl, 3-aminopropyl, 2-hexyl, and 4-aminobutyl;

20 A is selected from the group consisting of a bond,  $CH_2$ ,  $CH_3CH$ , and  $CH_2CH_2$ ;

$X^O$  is selected from the group consisting of hydrido, hydroxy, amino, amidino, aminomethyl, cyano, methyl, trifluoromethyl, hydroxymethyl, and fluoro;

25  $R^1$  is selected from the group consisting of hydrido, hydroxy, hydroxymethyl, amino, aminomethyl, cyano, methyl, trifluoromethyl, and fluoro;

$R^2$  is  $Z^0-Q$ ;

$Z^0$  is selected from the group consisting of a bond, O, and S, NH;

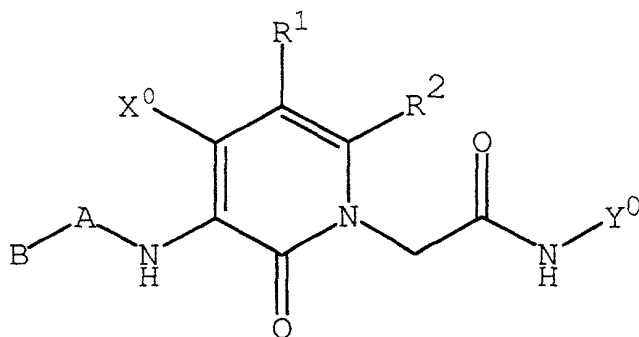
30 Q is selected from the group consisting of

- 3-amidocarbonyl-5-aminophenyl, 3-amino-5-(N-benzylamidocarbonyl)phenyl,  
 3-amino-5-(N-(2-chlorobenzyl)amidocarbonyl)phenyl,  
 3-amino-5-(N-(3-fluorobenzyl)amidocarbonyl)phenyl,  
 3-amino-5-(N-(2-trifluoromethylbenzyl)amidocarbonyl)phenyl,  
 5 3-amino-5-(N-(1-phenylethyl)amidocarbonyl)phenyl,  
 3-amino-5-(N-(1-methyl-1-phenylethyl)amidocarbonyl)phenyl,  
 3-amino-5-(N-benzylamidosulfonyl)phenyl,  
 3-amino-5-(N-(2-chlorobenzyl)amidosulfonyl)phenyl,  
 3-amino-5-(N-ethylamidocarbonyl)phenyl,  
 10 3-amino-5-(N-isopropylamidocarbonyl)phenyl,  
 3-amino-5-(N-propylamidocarbonyl)phenyl,  
 3-amino-5-(N-isobutylamidocarbonyl)phenyl,  
 3-amino-5-(N-(2-butyl)amidocarbonyl)phenyl,  
 3-amino-5-(N-cyclobutylamidocarbonyl)phenyl,  
 15 3-amino-5-(N-cyclopentylamidocarbonyl)phenyl,  
 3-amino-5-(N-cyclohexylamidocarbonyl)phenyl, 3-aminophenyl,  
 3-carboxy-5-aminophenyl, 3-chlorophenyl, 3,5-diaminophenyl,  
 3-dimethylaminophenyl, 3-hydroxyphenyl, 3-methanesulfonylaminophenyl,  
 3-methylaminophenyl, 2-methylphenyl, 3-methylphenyl, phenyl,  
 20 3-trifluoroacetamidophenyl, 3-bromo-2-thienyl, 2-thienyl, and 3-thienyl, with  
 the proviso that Q is other than a phenyl or a substituted phenyl when  $Z^0$  is a  
 bond;

$Y^0$  is selected from the group consisting of 5-amidino-2-thienylmethyl,  
 4-amidinobenzyl, 2-fluoro-4-amidinobenzyl, and 3-fluoro-4-amidinobenzyl.

25

24. A compound as recited in Claim 17 where said compound is selected from  
 the group of the Formula:



or a pharmaceutically acceptable salt thereof, wherein;

$R^2$  is 3-aminophenoxy, B is 2,2,2-trifluoroethyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is (S)-2-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 5-amino-2-fluorophenoxy, B is isopropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 2-methyl-3-aminophenoxy, B is isopropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is ethyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is ethyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is 2-propenyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is isopropyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is isopropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is 2-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is (R)-2-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is 2-propynyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is 3-pentyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is hydrido, A is  $CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

5  $R^2$  is 3-aminophenoxy, B is ethyl, A is  $CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is 2-methylpropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

10  $R^2$  is 3-aminophenoxy, B is 2-propyl, A is  $CH_3CH$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is propyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is 6-amidocarbonylhexyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

15  $R^2$  is 3-aminophenoxy, B is tert-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is tert-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

20  $R^2$  is 3-aminophenoxy, B is 3-hydroxypropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is 2-methylpropyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

25  $R^2$  is 3-aminophenoxy, B is 1-methoxy-2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is 2-methoxyethyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is 2-propyl, A is single bond,  $Y^0$  is 5-amidino-2-thienylmethyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

5  $R^2$  is 3-aminophenoxy, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidino-3-fluorobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-carboxyphenoxy, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

10  $R^2$  is 3-aminophenoxy, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidino-3-fluorobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxy-2-thienyl, B is 2,2,2-trifluoroethyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxy-2-thienyl, B is (S)-2-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

15  $R^2$  is 5-amino-4-fluoro-3-carboxy-2-thienyl, B is isopropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 4-methyl-3-amino-5-carboxy-2-thienyl, B is isopropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

20  $R^2$  is 3-amino-5-carboxy-2-thienyl, B is ethyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxy-2-thienyl, B is ethyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxy-2-thienyl, B is 2-propenyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

25  $R^2$  is 3-amino-5-carboxy-2-thienyl, B is isopropyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxy-2-thienyl, B is isopropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxy-2-thienyl, B is 2-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

5  $R^2$  is 3-amino-5-carboxy-2-thienyl, B is (R)-2-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxy-2-thienyl, B is 2-propynyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

10  $R^2$  is 3-amino-5-carboxy-2-thienyl, B is 3-pentyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxy-2-thienyl, B is hydrido, A is  $CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxy-2-thienyl, B is ethyl, A is  $CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

15  $R^2$  is 3-amino-5-carboxy-2-thienyl, B is 2-methypropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxy-2-thienyl, B is 2-propyl, A is  $CH_3CH$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

20  $R^2$  is 3-amino-5-carboxy-2-thienyl, B is propyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxy-2-thienyl, B is 6-amidocarbonylhexyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxy-2-thienyl, B is tert-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

25  $R^2$  is 3-amino-5-carboxy-2-thienyl, B is tert-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxy-2-thienyl, B is 3-hydroxypropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxy-2-thienyl, B is 2-methylpropyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

5  $R^2$  is 3-amino-5-carboxy-2-thienyl, B is butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxy-2-thienyl, B is 1-methoxy-2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

10  $R^2$  is 3-amino-5-carboxy-2-thienyl, B is 2-methoxyethyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxy-2-thienyl, B is 2-propyl, A is single bond,  $Y^0$  is 5-amidino-2-thienylmethyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxy-2-thienyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidino-3-fluorobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

15  $R^2$  is 3-carboxy-5-carboxy-2-thienyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxy-2-thienyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidino-3-fluorobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

20  $R^2$  is 3-amino-5-carboxyphenylthio, B is 2,2,2-trifluoroethyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxyphenylthio, B is (S)-2-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 5-amino-2-fluoro-5-carboxyphenylthio, B is isopropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

25  $R^2$  is 2-methyl-3-amino-5-carboxyphenylthio, B is isopropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;



$R^2$  is 3-amino-5-carboxyphenylthio, B is ethyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxyphenylthio, B is ethyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

5  $R^2$  is 3-amino-5-carboxyphenylthio, B is 2-propenyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxyphenylthio, B is isopropyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

10  $R^2$  is 3-amino-5-carboxyphenylthio, B is isopropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxyphenylthio, B is 2-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxyphenylthio, B is (R)-2-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

15  $R^2$  is 3-amino-5-carboxyphenylthio, B is 2-propynyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxyphenylthio, B is 3-pentyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

20  $R^2$  is 3-amino-5-carboxyphenylthio, B is hydrido, A is  $CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxyphenylthio, B is ethyl, A is  $CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxyphenylthio, B is 2-methypropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

25  $R^2$  is 3-amino-5-carboxyphenylthio, B is 2-propyl, A is  $CH_3CH$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxyphenylthio, B is propyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxyphenylthio, B is 6-amidocarbonylhexyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

5  $R^2$  is 3-amino-5-carboxyphenylthio, B is tert-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxyphenylthio, B is tert-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

10  $R^2$  is 3-amino-5-carboxyphenylthio, B is 3-hydroxypropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxyphenylthio, B is 2-methylpropyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxyphenylthio, B is butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

15  $R^2$  is 3-amino-5-carboxyphenylthio, B is 1-methoxy-2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxyphenylthio, B is 2-methoxyethyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

20  $R^2$  is 3-amino-5-carboxyphenylthio, B is 2-propyl, A is single bond,  $Y^0$  is 5-amidino-2-thienylmethyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxyphenylthio, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidino-3-fluorobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-carboxy-5-carboxyphenylthio, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

25  $R^2$  is 3-amino-5-carboxyphenylthio, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidino-3-fluorobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amidocarbonyl-5-aminophenoxy, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-benzylamidocarbonyl)phenoxy, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

5  $R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidocarbonyl)phenoxy, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidosulfonyl)phenoxy, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

10  $R^2$  is 3-amino-5-(N-(2-trifluoromethylbenzyl)amidocarbonyl)- phenoxy, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3,5-diaminophenoxy, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

15  $R^2$  is 3-amino-5-carboxyphenoxy, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amidocarbonyl-5-aminophenoxy, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-benzylamidocarbonyl)phenoxy, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

20  $R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidocarbonyl)phenoxy, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidosulfonyl)phenoxy, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

25  $R^2$  is 3-amino-5-(N-(2-trifluoromethylbenzyl)amidocarbonyl)phenoxy, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3,5-diaminophenoxy, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxyphenoxy, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

5  $R^2$  is 3-amidocarbonyl-5-amino-2-thienyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-benzylamidocarbonyl)-2-thienyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

10  $R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidocarbonyl)-2-thienyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidosulfonyl)-2-thienyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

15  $R^2$  is 3-amino-5-(N-(2-trifluoromethylbenzyl)amidocarbonyl)-2-thienyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3,5-diamino-2-thienyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxy-2-thienyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

20  $R^2$  is 3-amidocarbonyl-5-amino-2-thienyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-benzylamidocarbonyl)-2-thienyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

25  $R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidocarbonyl)-2-thienyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-benzylamidocarbonyl)phenylthio, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^0$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidocarbonyl)phenylthio, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^0$  is hydrido;

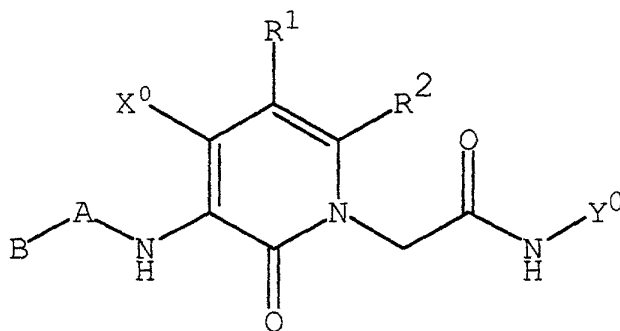
5  $R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidodisulfonyl)phenylthio, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^0$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-trifluoromethylbenzyl)amidocarbonyl)phenylthio, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^0$  is hydrido;

10  $R^2$  is 3,5-diaminophenylthio, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^0$  is hydrido;

$R^2$  is 3-amino-5-carboxyphenylthio, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^0$  is hydrido.

15 25. Compound of Claim 2 of the Formula:



or a pharmaceutically acceptable salt thereof, wherein;

B is a C3-C7 cycloalkyl or a C4-C6 saturated heterocyclyl, wherein each ring carbon is optionally substituted with  $R^{33}$ , a ring carbon other than the

20 ring carbon at the point of attachment of B to A is optionally substituted with oxo provided that no more than one ring carbon is substituted by oxo at the same time, ring carbons and a nitrogen adjacent to the carbon atom at the point of attachment are optionally substituted with  $R^9$  or  $R^{13}$ , a ring carbon or

- nitrogen adjacent to the  $R^9$  position and two atoms from the point of attachment is optionally substituted with  $R^{10}$ , a ring carbon or nitrogen adjacent to the  $R^{13}$  position and two atoms from the point of attachment is optionally substituted with  $R^{12}$ , a ring carbon or nitrogen three atoms from the point of attachment
- 5 and adjacent to the  $R^{10}$  position is optionally substituted with  $R^{11}$ , a ring carbon or nitrogen three atoms from the point of attachment and adjacent to the  $R^{12}$  position is optionally substituted with  $R^{33}$ , and a ring carbon or nitrogen four atoms from the point of attachment and adjacent to the  $R^{11}$  and  $R^{33}$  positions is optionally substituted with  $R^{34}$ ;
- 10  $R^9$ ,  $R^{11}$ , and  $R^{13}$  are independently selected from the group consisting of hydrido, hydroxy, amino, amidino, guanidino, alkylamino, alkylthio, alkylsulfonamido, alkylsulfinyl, alkylsulfonyl, amidosulfonyl, alkyl, alkoxy, halo, haloalkyl, haloalkoxy, hydroxyalkyl, hydroxyhaloalkyl, carboxy, carboxamido, and cyano;
- 15  $R^{10}$  and  $R^{12}$  are independently selected from the group consisting of hydrido, acetamido, haloacetamido, amidino, guanidino, alkyl, aryl, aralkyl, cycloalkyl, cycloalkylalkyl, heteroaryl, heterocyclyl, alkoxy, cycloalkoxy, cycloalkylalkoxy, aralkoxy, aryloxy, heteroaryloxy, heteroaralkoxy, heterocyclyloxy, heterocyclylalkoxy, hydroxy, amino,
- 20 alkoxyamino, alkylamino, arylamino, aralkylamino, heteroarylamino, heteroaralkylamino, heterocyclylamino, heterocyclylalkylamino, alkylsulfonamido, amidosulfonyl, arylsulfinyl, aralkylsulfinyl, cycloalkylsulfinyl, heteroarylsulfinyl, arylsulfonyl, aralkylsulfonyl, cycloalkylsulfonyl, heteroarylsulfonyl, hydroxyalkyl, hydroxyhaloalkyl,
- 25 aminoalkyl, carboalkoxy, carboxy, carboxyalkyl, carboxamido, halo, haloalkyl, and cyano;
- $R^{33}$  and  $R^{34}$  independently selected from the group consisting of hydrido, acetamido, haloacetamido, amidino, guanidino, alkoxy, hydroxy, amino, alkoxyamino, alkylamino, alkylthio, amidosulfonyl, alkyl, halo, haloalkyl,

haloalkoxy, hydroxyalkyl, hydroxyhaloalkyl, carboalkoxy, carboxy, carboxamido, cyano, and  $Q^b$ ;

A is a bond or  $(CH(R^{15}))_{pa}-(W^7)_{rr}$  wherein  $rr$  is 0 or 1,  $pa$  is an integer selected from 0 through 3, and  $W^7$  is  $(R^7)NC(O)$  or  $N(R^7)$ ;

5  $R^7$  is selected from the group consisting of hydrido, hydroxy and alkyl;

$R^{15}$  is selected from the group consisting of hydrido, halo, alkyl, and haloalkyl;

10  $R^1$  and  $X^0$  are independently selected from the group consisting of hydrido, hydroxy, hydroxyamino, amidino, amino, cyano, hydroxyalkyl, alkoxy, alkyl, alkylamino, aminoalkyl, alkylthio, alkoxyamino, haloalkyl, haloalkoxy, and halo;

$R^2$  is  $Z^0-Q$ ;

$Z^0$  is a bond or  $W^0-(CH(R^{42}))_p$  wherein  $p$  is 0 or 1 and  $W^0$  is selected from the group consisting of O, S, and  $N(R^{41})$ ;

15  $R^{41}$  and  $R^{42}$  are independently hydrido or alkyl;

20 Q is phenyl or a heteroaryl of 5 or 6 ring members, wherein a carbon adjacent to the carbon at the point of attachment of said phenyl or heteroaryl ring to  $Z^0$  is optionally substituted by  $R^9$ , the other carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^{13}$ , a carbon adjacent to  $R^9$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{10}$ , a carbon adjacent to  $R^{13}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{12}$ , and any carbon adjacent to both  $R^{10}$  and  $R^{12}$  is optionally substituted by  $R^{11}$ , with the proviso that Q is other than a phenyl when  $Z^0$  is a bond;

$Y^0$  is phenyl or a heteroaryl of 5 or 6 ring members, wherein one carbon of said phenyl or said heteroaryl is substituted by  $Q^s$ , a carbon two or three contiguous atoms from the point of attachment of  $Q^s$  to the phenyl or heteroaryl ring is substituted by  $Q^b$ , a carbon adjacent to the point of attachment of  $Q^s$  is optionally substituted by  $R^{17}$ , another carbon adjacent to the point of attachment of  $Q^s$  is optionally substituted by  $R^{18}$ , a carbon adjacent to  $Q^b$  is optionally substituted by  $R^{16}$ , and another carbon adjacent to  $Q^b$  is optionally substituted by  $R^{19}$ ;

$R^{16}$ ,  $R^{17}$ ,  $R^{18}$ , and  $R^{19}$  are independently selected from the group consisting of hydrido, amidino, guanidino, carboxy, haloalkylthio, alkoxy, hydroxy, amino, alkylamino, alkylthio, alkylsulfinyl, alkylsulfonyl, alkanoyl, haloalkanoyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, aminoalkyl, and cyano;

$R^{16}$  or  $R^{19}$  is optionally  $NR^{20}R^{21}$  or  $C(NR^{25})NR^{23}R^{24}$ , with the proviso that  $R^{16}$ ,  $R^{19}$ , and  $Q^b$  are not simultaneously hydrido;

$Q^b$  is selected from the group consisting of  $NR^{20}R^{21}$ , hydrido, and  $C(NR^{25})NR^{23}R^{24}$ , with the proviso that no more than one of  $R^{20}$  and  $R^{21}$  is hydroxy at the same time and with the further proviso that no more than one of  $R^{23}$  and  $R^{24}$  is hydroxy at the same time;

$R^{20}$ ,  $R^{21}$ ,  $R^{23}$ ,  $R^{24}$ , and  $R^{25}$  are independently selected from the group consisting of hydrido, alkyl, and hydroxy;

$Q^s$  is selected from the group consisting of a bond,  $CH_2$ , and  $CH_2CH_2$ .



26. Compound of Claim 25 or a pharmaceutically acceptable salt thereof, wherein;

B is selected from the group consisting of cyclopropyl, cyclobutyl, oxetan-3-yl, azetidin-1-yl, azetidin-2-yl, azetidin-3-yl, thiaetan-3-yl, cyclopentyl, cyclohexyl, norbornyl, 7-oxabicyclo[2.2.1]heptan-2-yl, bicyclo[3.1.0]hexan-6-yl, cycloheptyl, 2-morpholinyl, 3-morpholinyl, 4-morpholinyl, 1-piperazinyl, 2-piperazinyl, 1-piperidinyl, 2-piperidinyl, 3-piperidinyl, 4-piperidinyl, 1-pyrrolidinyl, 2-pyrrolidinyl, 3-pyrrolidinyl, 2-dioxanyl, 4H-2-pyranyl, 4H-3-pyranyl, 4H-4-pyranyl, 4H-pyran-4-one-2-yl, 4H-pyran-4-one-3-yl, 2-tetrahydrofuranyl, 3-tetrahydrofuranyl, 2-tetrahydropyranyl, 3-tetrahydropyranyl, 4-tetrahydropyranyl, 2-tetrahydrothienyl, and 3-tetrahydrothienyl, wherein each ring carbon is optionally substituted with  $R^{33}$ , ring carbons and a nitrogen adjacent to the carbon atom at the point of attachment are optionally substituted with  $R^9$  or  $R^{13}$ , a ring carbon or nitrogen adjacent to the  $R^9$  position and two atoms from the point of attachment is optionally substituted with  $R^{10}$ , and a ring carbon or nitrogen adjacent to the  $R^{13}$  position and two atoms from the point of attachment is optionally substituted with  $R^{12}$ ;

$R^9$ ,  $R^{11}$ , and  $R^{13}$  are independently selected from the group consisting of hydrido, amidino, guanidino, carboxy, methyl, ethyl, propyl, isopropyl, methoxy, ethoxy, isopropoxy, propoxy, hydroxy, amino, N-methylamino, N,N-dimethylamino, N-ethylamino, methylthio, ethylthio, isopropylthio, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, 2,2,3,3,3-pentafluoropropyl, trifluoromethoxy, 1,1,2,2-tetrafluoroethoxy, fluoro, chloro, bromo, methanesulfonamido, amidosulfonyl, N-methylamidosulfonyl, N,N-dimethylamidosulfonyl, hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl, 2,2,2-trifluoro-1-hydroxyethyl, amidocarbonyl, N-methylamidocarbonyl, N,N-dimethylamidocarbonyl, and cyano;

$R^{10}$  and  $R^{12}$  are independently selected from the group consisting of hydrido, amidino, guanidino, carboxy, carboxymethyl, methyl, ethyl, propyl,

- isopropyl, methoxy, ethoxy, isopropoxy, propoxy, hydroxy, amino, methoxyamino, ethoxyamino, acetamido, trifluoroacetamido, aminomethyl, 1-aminoethyl, 2-aminoethyl, N-methylamino, dimethylamino, N-ethylamino, methanesulfonamido, amidosulfonyl, N-methylamidossulfonyl,
- 5 N,N-dimethylamidossulfonyl, hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl, 2,2,2-trifluoro-1-hydroxyethyl, methoxycarbonyl, ethoxycarbonyl, amidocarbonyl, N-methylamidocarbonyl, N,N-dimethylamidocarbonyl, N-benzylamidocarbonyl, N-(2-chlorobenzyl)amidocarbonyl, N-(3-fluorobenzyl)amidocarbonyl, N-(2-trifluoromethylbenzyl)amidocarbonyl,
- 10 N-(1-phenylethyl)amidocarbonyl, N-(1-methyl-1-phenylethyl)amidocarbonyl, N-benzylamidossulfonyl, N-(2-chlorobenzyl)amidossulfonyl, N-ethylamidocarbonyl, N-isopropylamidocarbonyl, N-propylamidocarbonyl, N-isobutylamidocarbonyl, N-(2-butyl)amidocarbonyl, N-cyclobutylamidocarbonyl, N-cyclopentylamidocarbonyl,
- 15 N-cyclohexylamidocarbonyl, fluoro, chloro, bromo, cyano, cyclobutoxy, cyclohexoxy, cyclohexylmethoxy, 4-trifluoromethylcyclohexylmethoxy, cyclopentoxo, benzyl, benzyloxy, 4-bromo-3-fluorophenoxy, 3-bromobenzyloxy, 4-bromobenzyloxy, 4-bromobenzylamino, 5-bromopyrid-2-ylmethylamino, 4-butoxyphenamino, 3-chlorobenzyl,
- 20 4-chlorophenoxy, 4-chloro-3-ethylphenoxy, 4-chloro-3-ethylbenzylamino, 4-chloro-3-ethylphenylamino, 3-chlorobenzyloxy, 4-chlorobenzyloxy, 4-chlorobenzylsulfonyl, 4-chlorophenylamino, 4-chlorophenylsulfonyl, 5-chloropyrid-3-yloxy, 2-cyanopyrid-3-yloxy, 2,3-difluorobenzyloxy, 2,4-difluorobenzyloxy, 3,4-difluorobenzyloxy, 2,5-difluorobenzyloxy,
- 25 ,5-difluorophenoxy, 3,5-difluorobenzyloxy, 4-difluoromethoxybenzyloxy, 2,3-difluorophenoxy, 2,4-difluorophenoxy, 2,5-difluorophenoxy, 3,5-dimethylphenoxy, 3,4-dimethylphenoxy, 3,4-dimethylbenzyloxy, 3,5-dimethylbenzyloxy, 4-ethoxyphenoxy, 4-ethylbenzyloxy, 3-ethylphenoxy, 4-ethylaminophenoxy, 3-ethyl-5-methylphenoxy, 4-fluorobenzyloxy,
- 30 2-fluoro-3-trifluoromethylbenzyloxy, 3-fluoro-5-trifluoromethylbenzyloxy, 4-fluoro-2-trifluoromethylbenzyloxy, 4-fluoro-3-trifluoromethylbenzyloxy, 2-fluorophenoxy, 4-fluorophenoxy, 2-fluoro-3-trifluoromethylphenoxy, 2-fluorobenzyloxy, 4-fluorophenylamino, 2-fluoro-4-trifluoromethylphenoxy, 4-isopropylbenzyloxy, 3-isopropylphenoxy, 4-isopropylphenoxy,
- 35 4-isopropyl-3-methylphenoxy, 4-isopropylbenzyloxy, 3-isopropylphenoxy,

- 4-isopropylphenoxy, 4-isopropyl-3-methylphenoxy, phenylamino,  
 1-phenylethoxy, 2-phenylethoxy, 2-phenylethyl, 2-phenylethylamino,  
 phenylsulfonyl, 3-trifluoromethoxybenzyloxy, 4-trifluoromethoxybenzyloxy,  
 3-trifluoromethoxyphenoxy, 4-trifluoromethoxyphenoxy,  
 5 3-trifluoromethylbenzyloxy, 4-trifluoromethylbenzyloxy,  
 2,4-bis-trifluoromethylbenzyloxy, 3-trifluoromethylbenzyl,  
 3,5-bis-trifluoromethylbenzyloxy, 4-trifluoromethylphenoxy,  
 3-trifluoromethylphenoxy, 3-trifluoromethylthiobenzyloxy,  
 4-trifluoromethylthiobenzyloxy, 2,3,4-trifluorophenoxy, 2,3,5-trifluorophenoxy,  
 10 3-pentafluoroethylphenoxy, 3-(1,1,2,2-tetrafluoroethoxy)phenoxy, and  
 3-trifluoromethylthiophenoxy;

- $R^{33}$  is selected from the group consisting of hydrido, amidino,  
 guanidino, carboxy, methoxy, ethoxy, isopropoxy, propoxy, hydroxy, amino,  
 methoxyamino, ethoxyamino, acetamido, trifluoroacetamido, N-methylamino,  
 15 dimethylamino, N-ethylamino, methylthio, ethylthio, isopropylthio,  
 trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl,  
 2,2,3,3,3-pentafluoropropyl, trifluoromethoxy, 1,1,2,2-tetrafluoroethoxy, fluoro,  
 chloro, bromo, amidosulfonyl, N-methylamidodisulfonyl,  
 N,N-dimethylamidodisulfonyl, hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl,  
 20 2,2,2-trifluoro-1-hydroxyethyl, methoxycarbonyl, ethoxycarbonyl,  
 amidocarbonyl, N-methylamidocarbonyl, N,N-dimethylamidocarbonyl, cyano,  
 and  $Q^b$ ;

- A is selected from the group consisting of a bond, NH,  $N(CH_3)$ ,  
 $N(OH)$ ,  $CH_2$ ,  $CH_3CH$ ,  $CF_3CH$ ,  $NHC(O)$ ,  $N(CH_3)C(O)$ ,  $C(O)NH$ ,  
 25  $C(O)N(CH_3)$ ,  $CH_2CH_2$ ,  $CH_2CH_2CH_2$ ,  $CH_3CHCH_2$ , and  $CF_3CHCH_2$ ;

- $R^1$  and  $X^O$  are independently selected from the group consisting of  
 hydrido, hydroxy, amino, amidino, hydroxyamino, aminomethyl, 1-aminoethyl,  
 methylamino, dimethylamino, cyano, methyl, ethyl, trifluoromethyl,  
 pentafluoroethyl, 2,2,2-trifluoroethyl, methoxy, hydroxymethyl, 1-hydroxyethyl,  
 30 2-hydroxyethyl, methoxyamino, methylthio, ethylthio, trifluoromethoxy,  
 1,1,2,2-tetrafluoroethoxy, fluoro, chloro, and bromo;

$R^2$  is  $Z^0-Q$ ;

$Z^0$  is selected from the group consisting of a bond, O, S, NH, N(CH<sub>3</sub>), OCH<sub>2</sub>, SCH<sub>2</sub>, N(H)CH<sub>2</sub>, and N(CH<sub>3</sub>)CH<sub>2</sub>;

- Q is selected from the group consisting of phenyl, 2-thienyl, 3-thienyl, 2-furyl, 3-furyl, 2-pyrrolyl, 3-pyrrolyl, 2-imidazolyl, 4-imidazolyl, 3-pyrazolyl, 4-pyrazolyl, 2-thiazolyl, 3-isoxazolyl, 5-isoxazolyl, 2-pyridyl, 3-pyridyl, 4-pyridyl, 2-pyrazinyl, 2-pyrimidinyl, 4-pyrimidinyl, 5-pyrimidinyl, 3-pyridazinyl, 4-pyridazinyl, and 1,3,5-triazin-2-yl, wherein a carbon adjacent to the carbon at the point of attachment of said phenyl or heteroaryl ring to  $Z^0$  is optionally substituted by  $R^9$ , the other carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^{13}$ , a carbon adjacent to  $R^9$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{10}$ , a carbon adjacent to  $R^{13}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{12}$ , and any carbon adjacent to both  $R^{10}$  and  $R^{12}$  is optionally substituted by  $R^{11}$ , with the proviso that Q is other than a phenyl when  $Z^0$  is a bond;

$Y^0$  is selected from the group consisting of:

- 1-Q<sup>b</sup>-4-Q<sup>s</sup>-2-R<sup>16</sup>-3-R<sup>17</sup>-5-R<sup>18</sup>-6-R<sup>19</sup> benzene,  
 2-Q<sup>b</sup>-5-Q<sup>s</sup>-6-R<sup>17</sup>-4-R<sup>18</sup>-3-R<sup>19</sup> pyridine,  
 3-Q<sup>b</sup>-6-Q<sup>s</sup>-2-R<sup>16</sup>-5-R<sup>18</sup>-4-R<sup>19</sup> pyridine, 2-Q<sup>b</sup>-5-Q<sup>s</sup>-3-R<sup>16</sup>-6-R<sup>18</sup> pyrazine,  
 3-Q<sup>b</sup>-6-Q<sup>s</sup>-2-R<sup>18</sup>-5-R<sup>18</sup>-4-R<sup>19</sup> pyridazine,  
 2-Q<sup>b</sup>-5-Q<sup>s</sup>-4-R<sup>17</sup>-6-R<sup>18</sup> pyrimidine, 5-Q<sup>b</sup>-2-Q<sup>s</sup>-4-R<sup>16</sup>-6-R<sup>19</sup> pyrimidine,  
 3-Q<sup>b</sup>-5-Q<sup>s</sup>-4-R<sup>16</sup>-2-R<sup>19</sup> thiophene, 2-Q<sup>b</sup>-5-Q<sup>s</sup>-3-R<sup>16</sup>-4-R<sup>17</sup> thiophene,  
 3-Q<sup>b</sup>-5-Q<sup>s</sup>-4-R<sup>16</sup>-2-R<sup>19</sup> furan, 2-Q<sup>b</sup>-5-Q<sup>s</sup>-3-R<sup>16</sup>-4-R<sup>17</sup> furan,  
 3-Q<sup>b</sup>-5-Q<sup>s</sup>-4-R<sup>16</sup>-2-R<sup>19</sup> pyrrole, 2-Q<sup>b</sup>-5-Q<sup>s</sup>-3-R<sup>16</sup>-4-R<sup>17</sup> pyrrole,

4-Q<sup>b</sup>-2-Q<sup>s</sup>-5-R<sup>19</sup> imidazole, 2-Q<sup>b</sup>-4-Q<sup>s</sup>-5-R<sup>17</sup> imidazole,  
 3-Q<sup>b</sup>-5-Q<sup>s</sup>-4-R<sup>16</sup> isoxazole, 5-Q<sup>b</sup>-3-Q<sup>s</sup>-4-R<sup>16</sup> isoxazole,  
 2-Q<sup>b</sup>-5-Q<sup>s</sup>-4-R<sup>16</sup> pyrazole, 4-Q<sup>b</sup>-2-Q<sup>s</sup>-5-R<sup>19</sup> thiazole, and  
 2-Q<sup>b</sup>-5-Q<sup>s</sup>-4-R<sup>17</sup> thiazole;

- 5           R<sup>16</sup>, R<sup>17</sup>, R<sup>18</sup>, and R<sup>19</sup> are independently selected from the group consisting of hydrido, methyl, ethyl, isopropyl, propyl, carboxy, amidino, guanidino, methoxy, ethoxy, isopropoxy, propoxy, hydroxy, amino, aminomethyl, 1-aminoethyl, 2-aminoethyl, N-methylamino, dimethylamino, N-ethylamino, methylthio, ethylthio, isopropylthio, trifluoromethylthio, methylsulfinyl, ethylsulfinyl, methylsulfonyl, ethylsulfonyl, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, 2,2,3,3,3-pentafluoropropyl, trifluoromethoxy, 1,1,2,2-tetrafluoroethoxy, fluoro, chloro, bromo, hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl, and cyano;
- 10           R<sup>16</sup> or R<sup>19</sup> is optionally C(NR<sup>25</sup>)NR<sup>23</sup>R<sup>24</sup> with the proviso that R<sup>16</sup>, R<sup>19</sup>, and Q<sup>b</sup> are not simultaneously hydrido;
- 15           Q<sup>b</sup> is C(NR<sup>25</sup>)NR<sup>23</sup>R<sup>24</sup> or hydrido, with the proviso that no more than one of R<sup>23</sup> and R<sup>24</sup> is hydroxy at the same time;
- R<sup>23</sup>, R<sup>24</sup>, and R<sup>25</sup> are independently selected from the group consisting of hydrido, methyl, ethyl, and hydroxy;
- 20           Q<sup>s</sup> is selected from the group consisting of a bond, CH<sub>2</sub> and CH<sub>2</sub>CH<sub>2</sub>.

27. Compound of Claim 26 or a pharmaceutically acceptable salt thereof, wherein;

- 25           B is selected from the group consisting of cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, cycloheptyl, oxalan-2-yl, 2-(2R)-bicyclo[2.2.1]-heptyl, 1-pyrrolidinyl, 1-piperidinyl, oxetan-3-yl, azetidin-1-yl, azetidin-2-yl, azetidin-3-yl, 7-oxabicyclo[2.2.1]heptan-2-yl, bicyclo[3.1.0]hexan-6-yl, 2-morpholinyl, 3-morpholinyl, 4-morpholinyl, 1-piperazinyl, 2-piperazinyl,

- 1-piperidinyl, 2-piperidinyl, 3-piperidinyl, 4-piperidinyl, 1-pyrrolidinyl,  
 2-pyrrolidinyl, 3-pyrrolidinyl, 2-dioxanyl, 4H-2-pyranyl, 4H-3-pyranyl,  
 4H-4-pyranyl, 4H-pyran-4-one-2-yl, 4H-pyran-4-one-3-yl, 2-tetrahydrofuranyl,  
 3-tetrahydrofuranyl, 2-tetrahydropyranyl, 3-tetrahydropyranyl,  
 5 4-tetrahydropyranyl, 2-tetrahydrothienyl, and 3-tetrahydrothienyl;

A is selected from the group consisting of a bond,  $\text{CH}_2$ ,  $\text{NHC(O)}$ ,

$\text{CH}_2\text{CH}_2$ , and  $\text{CH}_2\text{CH}_2\text{CH}_2$ ;

- $\text{R}^1$  and  $\text{X}^\text{O}$  are independently selected from the group consisting of  
 hydrido, hydroxy, amino, amidino, hydroxyamino, aminomethyl, methylamino,  
 10 cyano, methyl, trifluoromethyl, methoxy, hydroxymethyl, methoxyamino,  
 methylthio, trifluoromethoxy, fluoro, and chloro;

$\text{R}^2$  is  $\text{Z}^\text{O}$ -Q;

$\text{Z}^\text{O}$  is selected from the group consisting of a bond, O, S, NH,  $\text{N}(\text{CH}_3)$ ,

$\text{OCH}_2$ , and  $\text{SCH}_2$ ;

- 15 Q is selected from the group consisting of  
 3-amidocarbonyl-5-aminophenyl, 3-amino-5-(N-benzylamidocarbonyl)phenyl,  
 3-amino-5-benzylphenyl, 3-amino-5-(2-phenylethyl)phenyl,  
 3-amino-5-benzylaminophenyl, 3-amino-5-(2-phenylethylamino)phenyl,  
 3-amino-5-benzylloxyphenyl, 3-amino-5-(2-phenylethoxy)phenyl,  
 20 3-amino-5-(N-(2-chlorobenzyl)amidocarbonyl)phenyl,  
 3-amino-5-(N-(3-fluorobenzyl)amidocarbonyl)phenyl,  
 3-amino-5-(N-(2-trifluoromethylbenzyl)amidocarbonyl)phenyl,  
 3-amino-5-(N-(1-phenylethyl)amidocarbonyl)phenyl,  
 3-amino-5-(N-(1-methyl-1-phenylethyl)amidocarbonyl)phenyl,  
 25 3-amino-5-(N-benzylamidosulfonyl)phenyl,  
 3-amino-5-(N-(2-chlorobenzyl)amidosulfonyl)phenyl,  
 3-amino-5-(N-ethylamidocarbonyl)phenyl,  
 3-amino-5-(N-isopropylamidocarbonyl)phenyl,  
 3-amino-5-(N-propylamidocarbonyl)phenyl,  
 30 3-amino-5-(N-isobutylamidocarbonyl)phenyl,  
 3-amino-5-(N-(2-butyl)amidocarbonyl)phenyl,  
 3-amino-5-(N-cyclobutylamidocarbonyl)phenyl,

- 3-amino-5-(N-cyclopentylamidocarbonyl)phenyl,  
 3-amino-5-(N-cyclohexylamidocarbonyl)phenyl, 5-amino-2-fluorophenyl,  
 3-amino-5-hydroxymethylphenyl, 5-amino-3-methoxycarbonylphenyl,  
 3-amidinophenyl, 3-amino-2-methylphenyl, 5-amino-2-methylthiophenyl,  
 5 3-aminophenyl, 3-amino-5-(4-trifluoromethylbenzylamino)phenyl,  
 3-amino-5-(4-trifluoromethylbenzyloxy)phenyl, 3-carboxyphenyl,  
 3-carboxy-5-hydroxyphenyl, 3-amino-5-carboxyphenyl, 3-chlorophenyl,  
 2-chlorophenyl, 3-cyanophenyl, 3,5-diaminophenyl, 3-dimethylaminophenyl,  
 2-fluorophenyl, 3-fluorophenyl, 2-hydroxyphenyl, 3-hydroxyphenyl,  
 10 3-methanesulfonylaminophenyl, 2-methoxyphenyl, 3-methoxyphenyl,  
 3-methoxyaminophenyl, 3-methoxycarbonylphenyl, 2-methylaminophenyl,  
 3-methylaminophenyl, 2-methylphenyl, 3-methylphenyl, 4-methylphenyl,  
 phenyl, 3-trifluoroacetamidophenyl, 3-trifluoromethylphenyl,  
 2-trifluoromethylphenyl, 5-amino-2-thienyl, 5-amino-3-thienyl,  
 15 3-bromo-2-thienyl, 3-pyridyl, 4-pyridyl, 2-thienyl, and 3-thienyl, with the  
 proviso that Q is other than a phenyl or substituted phenyl when  $Z^0$  is a bond;

$Y^0$  is selected from the group consisting of:

- 1-Q<sup>b</sup>-4-Q<sup>s</sup>-2-R<sup>16</sup>-3-R<sup>17</sup>-5-R<sup>18</sup>-6-R<sup>19</sup> benzene,  
 2-Q<sup>b</sup>-5-Q<sup>s</sup>-6-R<sup>17</sup>-4-R<sup>18</sup>-3-R<sup>19</sup> pyridine,  
 20 3-Q<sup>b</sup>-6-Q<sup>s</sup>-2-R<sup>16</sup>-5-R<sup>18</sup>-4-R<sup>19</sup> pyridine,  
 3-Q<sup>b</sup>-5-Q<sup>s</sup>-4-R<sup>16</sup>-2-R<sup>19</sup> thiophene, and 2-Q<sup>b</sup>-5-Q<sup>s</sup>-3-R<sup>16</sup>-4-R<sup>17</sup> thiophene;

$R^{16}$  and  $R^{19}$  are independently selected from the group consisting of

hydrido, amidino, amino, aminomethyl, methoxy, methylamino, hydroxy,  
 hydroxymethyl, fluoro, chloro, and cyano;

- 25  $R^{16}$  or  $R^{19}$  is optionally  $C(NR^{25})NR^{23}R^{24}$  with the proviso that  $R^{16}$ ,  
 $R^{19}$ , and  $Q^b$  are not simultaneously hydrido;

$R^{17}$  and  $R^{18}$  are independently selected from the group consisting of

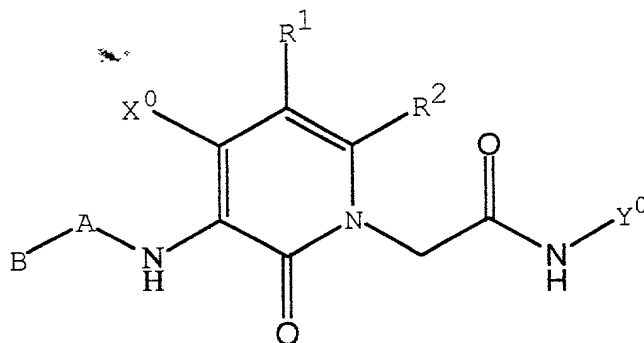
hydrido, fluoro, chloro, hydroxy, hydroxymethyl, amino, carboxy, and cyano;

$Q^b$  is  $C(NR^{25})NR^{23}R^{24}$  or hydrido;

$R^{23}$ ,  $R^{24}$ , and  $R^{25}$  are independently hydrido or methyl;

$Q^s$  is  $CH_2$ .

28. Compound of Claim 25 of the Formula:



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or a pharmaceutically acceptable salt thereof, wherein;

B is a C3-C7 cycloalkyl or a C4-C6 saturated heterocyclyl, wherein each ring carbon is optionally substituted with  $R^{33}$ , a ring carbon other than the ring carbon at the point of attachment of B to A is optionally substituted with oxo provided that no more than one ring carbon is substituted by oxo at the same time, ring carbons and a nitrogen adjacent to the carbon atom at the point of attachment are optionally substituted with  $R^9$  or  $R^{13}$ , a ring carbon or nitrogen adjacent to the  $R^9$  position and two atoms from the point of attachment is optionally substituted with  $R^{10}$ , a ring carbon or nitrogen adjacent to the  $R^{13}$  position and two atoms from the point of attachment is optionally substituted with  $R^{12}$ , a ring carbon or nitrogen three atoms from the point of attachment and adjacent to the  $R^{10}$  position is optionally substituted with  $R^{11}$ , a ring carbon or nitrogen three atoms from the point of attachment and adjacent to the  $R^{12}$  position is optionally substituted with  $R^{33}$ , and a ring carbon or nitrogen four atoms from the point of attachment and adjacent to the  $R^{11}$  and  $R^{33}$  positions is optionally substituted with  $R^{34}$ ;

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- $R^9$ ,  $R^{11}$ , and  $R^{13}$  are independently selected from the group consisting of hydrido, hydroxy, amino, amidino, guanidino, alkylamino, alkylthio, alkoxy, alkylsulfinyl, alkylsulfonyl, amidosulfonyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, carboxy, carboxamido, and cyano;
- 5  $R^{10}$  and  $R^{12}$  are independently selected from the group consisting of hydrido, acetamido, haloacetamido, amidino, guanidino, alkyl, alkoxy, alkoxyamino, hydroxy, amino, alkylamino, alkylsulfonamido, amidosulfonyl, hydroxyalkyl, aminoalkyl, halo, haloalkyl, carboalkoxy, carboxy, carboxamido, carboxyalkyl, and cyano;
- 10  $R^{33}$  and  $R^{34}$  are independently selected from the group consisting of hydrido, acetamido, haloacetamido, amidino, guanidino, alkoxy, hydroxy, amino, alkoxyamino, alkylamino, alkylthio, amidosulfonyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, carboalkoxy, carboxy, carboxamido, and cyano;
- $R^{33}$  is optionally  $Q^b$ ;
- 15 A is a bond or  $(CH(R^{15}))_{pa}-(W^7)_{rr}$  wherein  $rr$  is 0 or 1,  $pa$  is an integer selected from 0 through 3, and  $W^7$  is  $N(R^7)$ ;
- $R^7$  is hydrido or alkyl;
- $R^{15}$  is selected from the group consisting of hydrido, halo, alkyl, and haloalkyl;
- 20  $R^1$  and  $X^O$  are independently selected from the group consisting of hydrido, hydroxy, hydroxyamino, amidino, amino, cyano, hydroxyalkyl, alkoxy, alkyl, alkylamino, aminoalkyl, alkylthio, alkoxyamino, haloalkyl, haloalkoxy, and halo;
- $R^2$  is  $Z^0-Q$ ;
- 25  $Z^0$  is a bond or  $W^0-(CH_2)_p$  wherein  $p$  is 0 or 1 and  $W^0$  is selected from the group consisting of O, S, and  $N(H)$ ;
- Q is phenyl or a heteroaryl of 5 or 6 ring members, wherein a carbon adjacent to the carbon at the point of attachment of said phenyl or heteroaryl

ring to  $Z^0$  is optionally substituted by  $R^9$ , the other carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^{13}$ , a carbon adjacent to  $R^9$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{10}$ , a carbon adjacent to  $R^{13}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{12}$ , and any carbon adjacent to both  $R^{10}$  and  $R^{12}$  is optionally substituted by  $R^{11}$ , with the proviso that Q is other than a phenyl when  $Z^0$  is a bond;

$Y^0$  is phenyl or a heteroaryl of 5 or 6 ring members, wherein one carbon of said phenyl or said heteroaryl is substituted by  $Q^s$ , a carbon two or three contiguous atoms from the point of attachment of  $Q^s$  to the phenyl or heteroaryl ring is substituted by  $Q^b$ , a carbon adjacent to the point of attachment of  $Q^s$  is optionally substituted by  $R^{17}$ , another carbon adjacent to the point of attachment of  $Q^s$  is optionally substituted by  $R^{18}$ , a carbon adjacent to  $Q^b$  is optionally substituted by  $R^{16}$ , and another carbon adjacent to  $Q^b$  is optionally substituted by  $R^{19}$ ;

$R^{16}$ ,  $R^{17}$ ,  $R^{18}$ , and  $R^{19}$  are independently selected from the group consisting of hydrido, amidino, guanidino, carboxy, haloalkylthio, alkoxy, hydroxy, amino, alkylamino, alkylthio, alkylsulfinyl, alkylsulfonyl, alkanoyl, haloalkanoyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, aminoalkyl, and cyano;

$R^{16}$  or  $R^{19}$  is optionally  $NR^{20}R^{21}$  or  $C(NR^{25})NR^{23}R^{24}$ , with the proviso that  $R^{16}$ ,  $R^{19}$ , and  $Q^b$  are not simultaneously hydrido;

$Q^b$  is selected from the group consisting of  $NR^{20}R^{21}$ , hydrido, and  $C(NR^{25})NR^{23}R^{24}$ ;

$R^{20}$ ,  $R^{21}$ ,  $R^{23}$ ,  $R^{24}$ , and  $R^{25}$  are independently hydrido or alkyl;

$Q^s$  is  $CH_2$ .

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29. Compound of Claim 28 or a pharmaceutically acceptable salt thereof, wherein;

B is selected from the group consisting of cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, cycloheptyl, oxalan-2-yl, 2-(2R)-bicyclo[2.2.1]-heptyl, oxetan-3-yl, azetidin-1-yl, azetidin-2-yl, azetidin-3-yl, bicyclo[3.1.0]hexan-6-yl, 2-morpholinyl, 3-morpholinyl, 4-morpholinyl, 1-piperazinyl, 2-piperazinyl, 1-piperidinyl, 2-piperidinyl, 3-piperidinyl, 4-piperidinyl, 1-pyrrolidinyl, 2-pyrrolidinyl, 3-pyrrolidinyl, 2-dioxanyl, 2-tetrahydrofuranyl, 3-tetrahydrofuranyl, 2-tetrahydropyranyl, 3-tetrahydropyranyl, 4-tetrahydropyranyl, 2-tetrahydrothienyl, and 3-tetrahydrothienyl, wherein each ring carbon is optionally substituted with  $R^{33}$ , ring carbons and a nitrogen adjacent to the carbon atom at the point of attachment are optionally substituted with  $R^9$  or  $R^{13}$ , a ring carbon or nitrogen adjacent to the  $R^9$  position and two atoms from the point of attachment are optionally substituted with  $R^{10}$ , and a ring carbon or nitrogen atom adjacent to the  $R^{13}$  position and two atoms from the point of attachment is optionally substituted with  $R^{12}$ ;

$R^9$ ,  $R^{11}$ , and  $R^{13}$  are independently selected from the group consisting of hydrido, methyl, ethyl, methoxy, ethoxy, hydroxy, amino, N-methylamino, N,N-dimethylamino, methylthio, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, fluoro, chloro, bromo, amidosulfonyl, N-methylamid sulfonyl, N,N-dimethylamid sulfonyl, hydroxymethyl, 1-hydroxyethyl, amidocarbonyl, N-methylamidocarbonyl, carboxy, and cyano;

$R^{10}$  and  $R^{12}$  are independently selected from the group consisting of

- hydrido, amidino, amidocarbonyl, N-methylamidocarbonyl,  
 N-benzylamidocarbonyl, N-(2-chlorobenzyl)amidocarbonyl,  
 N-(3-fluorobenzyl)amidocarbonyl, N-(2-trifluoromethylbenzyl)amidocarbonyl,  
 5 N-(1-phenylethyl)amidocarbonyl, N-(1-methyl-1-phenylethyl)amidocarbonyl,  
 N-benzylamidosulfonyl, N-(2-chlorobenzyl)amidosulfonyl,  
 N-ethylamidocarbonyl, N-isopropylamidocarbonyl, N-propylamidocarbonyl,  
 N-isobutylamidocarbonyl, N-(2-butyl)amidocarbonyl,  
 N-cyclobutylamidocarbonyl, N-cyclopentylamidocarbonyl,  
 10 N-cyclohexylamidocarbonyl, guanidino, methyl, ethyl, methoxy, ethoxy,  
 hydroxy, hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl, carboxy,  
 carboxymethyl, amino, acetamido, trifluoromethyl, pentafluoroethyl,  
 2,2,2-trifluoroethyl, trifluoroacetamido, aminomethyl, N-methylamino,  
 dimethylamino, methoxyamino, amidosulfonyl, N-methylamidosulfonyl,  
 15 N,N-dimethylamidosulfonyl, methanesulfonamido, methoxycarbonyl, fluoro,  
 chloro, bromo, and cyano;

- $R^{33}$  is selected from the group consisting of hydrido, amidino,  
 guanidino, methyl, ethyl, methoxy, ethoxy, hydroxy, amino, N-methylamino,  
 dimethylamino, methoxyamino, methylthio, ethylthio, trifluoromethyl,  
 20 pentafluoroethyl, 2,2,2-trifluoroethyl, fluoro, chloro, bromo, amidosulfonyl, N-  
 methylamidosulfonyl, hydroxymethyl, amidocarbonyl, carboxy, cyano, and  $Q^b$ ;

A is selected from the group consisting of a bond, NH,  $N(CH_3)$ ,  $CH_2$ ,  
 $CH_3CH$ ,  $CH_2CH_2$ , and  $CH_2CH_2CH_2$ ;

- $X^O$  is selected from the group consisting of hydrido, hydroxy, amino,  
 25 amidino, aminomethyl, cyano, methyl, trifluoromethyl, hydroxymethyl, chloro,  
 and fluoro;

$R^1$  is selected from the group consisting of hydrido, hydroxy,  
 hydroxymethyl, amino, aminomethyl, methylamino, cyano, methyl,  
 trifluoromethyl, methoxy, methylthio, trifluoromethoxy, fluoro, and chloro;

- 30  $R^2$  is  $Z^0-Q$ ;

$Z^0$  is selected from the group consisting of a bond, O, S, NH,  $OCH_2$ ,  $SCH_2$ , and  $N(H)CH_2$ ;

Q is selected from the group consisting of phenyl, 2-thienyl, 2-furyl, 2-pyrrolyl, 2-imidazolyl, 2-thiazolyl, 3-isoxazolyl, 2-pyridyl, and 3-pyridyl, wherein a carbon adjacent to the carbon at the point of attachment of said phenyl or heteroaryl ring to  $Z^0$  is optionally substituted by  $R^9$ , the other carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^{13}$ , a carbon adjacent to  $R^9$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{10}$ , a carbon adjacent to  $R^{13}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{12}$ , and any carbon adjacent to both  $R^{10}$  and  $R^{12}$  is optionally substituted by  $R^{11}$ , with the proviso that Q is other than a phenyl when  $Z^0$  is a bond;

$Y^0$  is selected from the group consisting of:

1-Q<sup>b</sup>-4-Q<sup>s</sup>-2-R<sup>16</sup>-3-R<sup>17</sup>-5-R<sup>18</sup>-6-R<sup>19</sup> benzene,  
 2-Q<sup>b</sup>-5-Q<sup>s</sup>-6-R<sup>17</sup>-4-R<sup>18</sup>-3-R<sup>19</sup> pyridine, 2-Q<sup>b</sup>-5-Q<sup>s</sup>-3-R<sup>16</sup>-4-R<sup>17</sup> thiophene,  
 3-Q<sup>b</sup>-6-Q<sup>s</sup>-2-R<sup>16</sup>-5-R<sup>18</sup>-4-R<sup>19</sup> pyridine, 3-Q<sup>b</sup>-5-Q<sup>s</sup>-4-R<sup>16</sup>-2-R<sup>19</sup> thiophene,  
 3-Q<sup>b</sup>-5-Q<sup>s</sup>-4-R<sup>16</sup>-2-R<sup>19</sup> furan, 2-Q<sup>b</sup>-5-Q<sup>s</sup>-3-R<sup>16</sup>-4-R<sup>17</sup> furan,  
 3-Q<sup>b</sup>-5-Q<sup>s</sup>-4-R<sup>16</sup>-2-R<sup>19</sup> pyrrole, 2-Q<sup>b</sup>-5-Q<sup>s</sup>-3-R<sup>16</sup>-4-R<sup>17</sup> pyrrole,  
 4-Q<sup>b</sup>-2-Q<sup>s</sup>-5-R<sup>19</sup> thiazole, and 2-Q<sup>b</sup>-5-Q<sup>s</sup>-4-R<sup>17</sup> thiazole;

$R^{16}$ ,  $R^{17}$ ,  $R^{18}$ , and  $R^{19}$  are independently selected from the group consisting of hydrido, methyl, ethyl, amidino, guanidino, methoxy, hydroxy, amino, aminomethyl, 1-aminoethyl, 2-aminoethyl, N-methylamino, dimethylamino, methylthio, ethylthio, trifluoromethylthio, methylsulfinyl, methylsulfonyl, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, trifluoromethoxy, fluoro, chloro, hydroxymethyl, carboxy, and cyano;

$Q^b$  is  $NR^{20}R^{21}$  or  $C(NR^{25})NR^{23}R^{24}$ ;

$R^{20}$ ,  $R^{21}$ ,  $R^{23}$ ,  $R^{24}$ , and  $R^{25}$  are independently selected from the group consisting of hydrido, methyl, and ethyl;

$Q^s$  is  $CH_2$ .

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30. Compound of Claim 29 or a pharmaceutically acceptable salt thereof, wherein;

B is selected from the group consisting of cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, oxalan-2-yl, 2-(2R)-bicyclo[2.2.1]-heptyl, oxetan-3-yl, azetidin-1-yl, azetidin-2-yl, azetidin-3-yl, 1-pyrrolidinyl and 1-piperidinyl;

10

A is selected from the group consisting of a bond,  $CH_2$ ,  $CH_2CH_2$  and  $CH_2CH_2CH_2$ ;

$X^o$  is selected from the group consisting of hydrido, hydroxy, amino, amidino, aminomethyl, cyano, methyl, trifluoromethyl, hydroxymethyl, and fluoro;

15

$R^1$  is selected from the group consisting of hydrido, hydroxy, hydroxymethyl, amino, aminomethyl, cyano, methyl, trifluoromethyl, and fluoro;

$R^2$  is  $Z^0-Q$ ;

20

$Z^0$  is selected from the group consisting of a bond, O, S, NH, and  $OCH_2$ ;

Q is selected from the group consisting of  
 3-amidocarbonyl-5-aminophenyl, 3-amidocarbonyl-5-aminophenyl,  
 3-amino-5-(N-benzylamidocarbonyl)phenyl,  
 3-amino-5-(N-(2-chlorobenzyl)amidocarbonyl)phenyl,  
 3-amino-5-(N-(3-fluorobenzyl)amidocarbonyl)phenyl,  
 3-amino-5-(N-(2-trifluoromethylbenzyl)amidocarbonyl)phenyl,  
 3-amino-5-(N-(1-phenylethyl)amidocarbonyl)phenyl,  
 3-amino-5-(N-(1-methyl-1-phenylethyl)amidocarbonyl)phenyl,  
 3-amino-5-(N-benzylamidosulfonyl)phenyl,

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- 3-amino-5-(N-(2-chlorobenzyl)amidosulfonyl)phenyl,  
 3-amino-5-(N-ethylamidocarbonyl)phenyl,  
 3-amino-5-(N-isopropylamidocarbonyl)phenyl,  
 3-amino-5-(N-propylamidocarbonyl)phenyl,  
 5 3-amino-5-(N-isobutylamidocarbonyl)phenyl,  
 3-amino-5-(N-(2-butyl)amidocarbonyl)phenyl,  
 3-amino-5-(N-cyclobutylamidocarbonyl)phenyl,  
 3-amino-5-(N-cyclopentylamidocarbonyl)phenyl,  
 3-amino-5-(N-cyclohexylamidocarbonyl)phenyl, 5-amino-2-fluorophenyl,  
 10 3-amino-5-hydroxymethylphenyl, 5-amino-3-methoxycarbonylphenyl,  
 3-amidinophenyl, 3-amino-2-methylphenyl, 5-amino-2-methylthiophenyl,  
 3-aminophenyl, 3-carboxyphenyl, 3-carboxy-5-aminophenyl,  
 3-carboxy-5-hydroxyphenyl, 3-carboxymethyl-5-aminophenyl,  
 3-carboxymethyl-5-hydroxyphenyl, 3-carboxymethylphenyl, 3-chlorophenyl,  
 15 2-chlorophenyl, 3-cyanophenyl, 3,5-diaminophenyl, 3-dimethylaminophenyl,  
 2-fluorophenyl, 3-fluorophenyl, 2,5-difluorophenyl, 2-hydroxyphenyl,  
 3-hydroxyphenyl, 3-methanesulfonylaminophenyl, 2-methoxyphenyl,  
 3-methoxyphenyl, 3-methoxyaminophenyl, 3-methoxycarbonylphenyl,  
 2-methylaminophenyl, 3-methylaminophenyl, 2-methylphenyl, 3-methylphenyl,  
 20 4-methylphenyl, phenyl, 3-trifluoroacetamidophenyl, 3-trifluoromethylphenyl,  
 2-trifluoromethylphenyl, 5-amino-2-thienyl, 5-amino-3-thienyl,  
 3-bromo-2-thienyl, 3-pyridyl, 4-pyridyl, 2-thienyl, and 3-thienyl, with the  
 proviso that Q is other than a phenyl or a substituted phenyl when Z<sup>0</sup> is a bond;

Y<sup>0</sup> is selected from the group consisting of:

- 25 1-Q<sup>b</sup>-4-Q<sup>s</sup>-2-R<sup>16</sup>-3-R<sup>17</sup>-5-R<sup>18</sup>-6-R<sup>19</sup> benzene,  
 2-Q<sup>b</sup>-5-Q<sup>s</sup>-6-R<sup>17</sup>-4-R<sup>18</sup>-3-R<sup>19</sup> pyridine,  
 3-Q<sup>b</sup>-6-Q<sup>s</sup>-2-R<sup>16</sup>-5-R<sup>18</sup>-4-R<sup>19</sup> pyridine,  
 3-Q<sup>b</sup>-5-Q<sup>s</sup>-4-R<sup>16</sup>-2-R<sup>19</sup> thiophene, and 2-Q<sup>b</sup>-5-Q<sup>s</sup>-3-R<sup>16</sup>-4-R<sup>17</sup> thiophene;

R<sup>16</sup> and R<sup>19</sup> are independently selected from the group consisting of

- 30 hydrido, amidino, amino, aminomethyl, methoxy, methylamino, hydroxy,  
 hydroxymethyl, fluoro, chloro, and cyano;

$R^{17}$  and  $R^{18}$  are independently selected from the group consisting of hydrido, fluoro, chloro, hydroxy, hydroxymethyl, amino, carboxy, and cyano;

$Q^b$  is  $C(NR^{25})NR^{23}R^{24}$ ;

$R^{23}$ ,  $R^{24}$ , and  $R^{25}$  are independently hydrido or methyl;

5  $Q^s$  is  $CH_2$ .

31. Compound of Claim 30 or a pharmaceutically acceptable salt thereof, wherein;

10 B is selected from the group consisting of cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, oxalan-2-yl, 2-(2R)-bicyclo[2.2.1]-heptyl, oxetan-3-yl, azetidin-1-yl, azetidin-2-yl, azetidin-3-yl, and 1-piperidinyl;

A is selected from the group consisting of a bond,  $CH_2$ ,  $CH_2CH_2$  and  $CH_2CH_2CH_2$ ;

15  $X^o$  is selected from the group consisting of hydrido, hydroxy, amino, amidino, aminomethyl, cyano, methyl, trifluoromethyl, hydroxymethyl, and fluoro;

$R^1$  is selected from the group consisting of hydrido, hydroxy, hydroxymethyl, amino, aminomethyl, cyano, methyl, trifluoromethyl, and fluoro;

20  $R^2$  is  $Z^0-Q$ ;

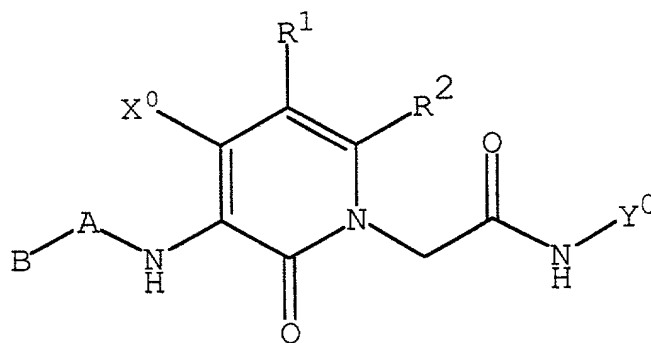
$Z^0$  is selected from the group consisting of a bond, O, and S, NH;

Q is selected from the group consisting of  
 3-amidocarbonyl-5-aminophenyl, 3-amino-5-(N-benzylamidocarbonyl)phenyl,  
 3-amino-5-(N-(2-chlorobenzyl)amidocarbonyl)phenyl,  
 25 3-amino-5-(N-(3-fluorobenzyl)amidocarbonyl)phenyl,  
 3-amino-5-(N-(2-trifluoromethylbenzyl)amidocarbonyl)phenyl,  
 3-amino-5-(N-(1-phenylethyl)amidocarbonyl)phenyl,  
 3-amino-5-(N-(1-methyl-1-phenylethyl)amidocarbonyl)phenyl,  
 3-amino-5-(N-benzylamidosulfonyl)phenyl,  
 30 3-amino-5-(N-(2-chlorobenzyl)amidosulfonyl)phenyl,



- 3-amino-5-(N-ethylamidocarbonyl)phenyl,  
 3-amino-5-(N-isopropylamidocarbonyl)phenyl,  
 3-amino-5-(N-propylamidocarbonyl)phenyl,  
 3-amino-5-(N-isobutylamidocarbonyl)phenyl,  
 5 3-amino-5-(N-(2-butyl)amidocarbonyl)phenyl,  
 3-amino-5-(N-cyclobutylamidocarbonyl)phenyl,  
 3-amino-5-(N-cyclopentylamidocarbonyl)phenyl,  
 3-amino-5-(N-cyclohexylamidocarbonyl)phenyl, 3-aminophenyl,  
 3-carboxy-5-aminophenyl, 3-chlorophenyl, 3,5-diaminophenyl,  
 10 3-dimethylaminophenyl, 3-hydroxyphenyl, 3-methanesulfonylaminophenyl,  
 3-methylaminophenyl, 2-methylphenyl, 3-methylphenyl, phenyl,  
 3-trifluoroacetamidophenyl, 3-bromo-2-thienyl, 2-thienyl, and 3-thienyl, with  
 the proviso that Q is other than a phenyl or a substituted phenyl when  $Z^0$  is a  
 bond;  
 15  $Y^0$  is selected from the group consisting of 5-amidino-2-thienylmethyl,  
 4-amidinobenzyl, 2-fluoro-4-amidinobenzyl, and 3-fluoro-4-amidinobenzyl.

32. A compound as recited in Claim 25 where said compound is selected from  
 the group of the Formula:



20

or a pharmaceutically acceptable salt thereof, wherein;

$R^2$  is 3-aminophenoxy, B is cyclopropyl, A is single bond,  $Y^0$  is 4-  
 amidinobenzyl,  $R^1$  is aminomethyl, and  $X^0$  is hydrido;

$R^2$  is 3-aminophenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidino-  
 25 2-fluorobenzyl,  $R^1$  is aminomethyl, and  $X^0$  is hydrido;

$R^2$  is 3-aminophenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is cyclopropyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

5  $R^2$  is 3-aminophenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidino-3-fluorobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is cyclopentyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is cyclopropyl, A is  $CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is 2-(2R)-bicyclo[2.2.1]-heptyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

15  $R^2$  is 3-aminophenoxy, B is cyclopentyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is cyclohexyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 2-hydroxyphenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

20  $R^2$  is phenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 2,6-dichlorophenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

25  $R^2$  is 3-aminophenoxy, B is cyclopropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

5  $R^2$  is 3-aminophenoxy, B is cyclopropyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

10  $R^2$  is 3-aminophenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidino-3-fluorobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is cyclopentyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is cyclopropyl, A is  $CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

15  $R^2$  is 3-aminophenoxy, B is 2-(2R)-bicyclo[2.2.1]-heptyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenoxy, B is cyclopentyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

20  $R^2$  is 3-aminophenoxy, B is cyclohexyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 2-hydroxyphenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is phenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

25  $R^2$  is 2,6-dichlorophenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amidocarbonyl-5-aminophenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-benzylamidocarbonyl)phenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

- 5  $R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidocarbonyl)phenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

- $R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidosulfonyl)phenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;
- 10

$R^2$  is 3-amino-5-(N-(2-trifluoromethylbenzyl)amidocarbonyl)-phenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

- $R^2$  is 3,5-diaminophenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;
- 15

$R^2$  is 3-amino-5-carboxyphenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amidocarbonyl-5-aminophenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

- 20  $R^2$  is 3-amino-5-(N-benzylamidocarbonyl)phenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidocarbonyl)phenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

- 25  $R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidosulfonyl)phenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-trifluoromethylbenzyl)amidocarbonyl)phenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3,5-diaminophenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxyphenoxy, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amidocarbonyl-5-aminophenylthio, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-benzylamidocarbonyl)phenylthio, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidocarbonyl)phenylthio, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidosulfonyl)phenylthio, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-trifluoromethylbenzyl)amidocarbonyl)phenylthio, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3,5-diaminophenylthio, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxyphenylthio, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amidocarbonyl-5-aminophenylthio, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-benzylamidocarbonyl)phenylthio, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidocarbonyl)phenylthio, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidosulfonyl)phenylthio, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-trifluoromethylbenzyl)amidocarbonyl)phenylthio, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3,5-diaminophenylthio, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxyphenylthio, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amidocarbonyl-5-amino-2-thienyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-benzylamidocarbonyl)-2-thienyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidocarbonyl)-2-thienyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidosulfonyl)-2-thienyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-trifluoromethylbenzyl)amidocarbonyl)-2-thienyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3,5-diamino-2-thienyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^0$  is hydrido;

$R^2$  is 3-amino-5-carboxy-2-thienyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^0$  is hydrido;

5  $R^2$  is 3-amidocarbonyl-5-amino-2-thienyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^0$  is hydrido;

$R^2$  is 3-amino-5-(N-benzylamidocarbonyl)-2-thienyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^0$  is hydrido;

10  $R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidocarbonyl)-2-thienyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^0$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidosulfonyl)-2-thienyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^0$  is hydrido;

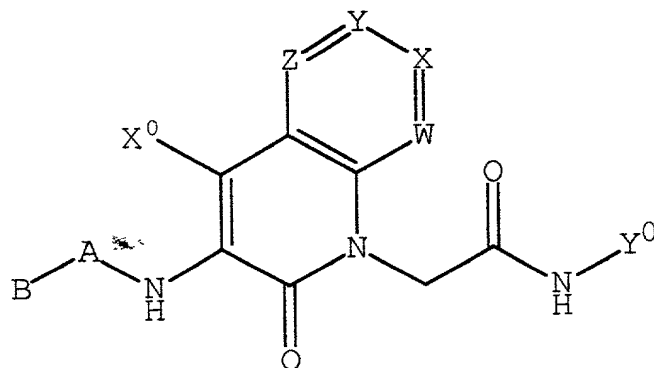
15  $R^2$  is 3-amino-5-(N-(2-trifluoromethylbenzyl)amidocarbonyl)-2-thienyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^0$  is hydrido;

$R^2$  is 3,5-diamino-2-thienyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^0$  is hydrido;

20  $R^2$  is 3-amino-5-carboxy-2-thienyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^0$  is hydrido.

25

## 33. Compound of Claim 2 of the Formula:



or a pharmaceutically acceptable salt thereof, wherein;

- B is phenyl or a heteroaryl of 5 or 6 ring members, wherein a carbon adjacent to the carbon at the point of attachment of said phenyl or heteroaryl ring to A is optionally substituted by R<sup>32</sup>, the other carbon adjacent to the carbon at the point of attachment is optionally substituted by R<sup>36</sup>, a carbon adjacent to R<sup>32</sup> and two atoms from the carbon at the point of attachment is optionally substituted by R<sup>33</sup>, a carbon adjacent to R<sup>36</sup> and two atoms from the carbon at the point of attachment is optionally substituted by R<sup>35</sup>, and any carbon adjacent to both R<sup>33</sup> and R<sup>35</sup> is optionally substituted by R<sup>34</sup>;

- R<sup>32</sup>, R<sup>33</sup>, R<sup>34</sup>, R<sup>35</sup>, and R<sup>36</sup> are independently selected from the group consisting of hydrido, acetamido, haloacetamido, amidino, guanidino, alkoxy, hydroxy, amino, alkoxyamino, alkylamino, alkylthio, amidosulfonyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, hydroxyhaloalkyl, carboalkoxy, carboxy, carboxamido, cyano, and Q<sup>b</sup>;

- B is optionally selected from the group consisting of hydrido, C2-C8 alkyl, C3-C8 alkenyl, C3-C8 alkynyl, and C2-C8 haloalkyl, wherein each member of group B is optionally substituted at any carbon up to and including 6 atoms from the point of attachment of B to A with one or more of the group consisting of R<sup>32</sup>, R<sup>33</sup>, R<sup>34</sup>, R<sup>35</sup>, and R<sup>36</sup>;



- B is a C3-C7 cycloalkyl or C4-C6 saturated heterocyclyl, wherein each ring carbon is optionally substituted with  $R^{33}$ , a ring carbon other than the ring carbon at the point of attachment of B to A is optionally substituted with oxo provided that no more than one ring carbon is substituted by oxo at the same time, ring carbons and nitrogen adjacent to the carbon atom at the point of attachment are optionally substituted with  $R^9$  or  $R^{13}$ , a ring carbon or nitrogen adjacent to the  $R^9$  position and two atoms from the point of attachment is optionally substituted with  $R^{10}$ , a ring carbon or nitrogen adjacent to the  $R^{13}$  position and two atoms from the point of attachment is optionally substituted with  $R^{12}$ , a ring carbon or nitrogen three atoms from the point of attachment and adjacent to the  $R^{10}$  position is optionally substituted with  $R^{11}$ , a ring carbon or nitrogen three atoms from the point of attachment and adjacent to the  $R^{12}$  position is optionally substituted with  $R^{33}$ , and a ring carbon or nitrogen four atoms from the point of attachment and adjacent to the  $R^{11}$  and  $R^{33}$  positions is optionally substituted with  $R^{34}$ ;

- $R^9$ ,  $R^{11}$ , and  $R^{13}$  are independently selected from the group consisting of hydrido, hydroxy, amino, amidino, guanidino, alkylamino, alkylthio, alkylsulfonamido, alkylsulfinyl, alkylsulfonyl, amidosulfonyl, alkyl, alkoxy, halo, haloalkyl, haloalkoxy, hydroxyalkyl, hydroxyhaloalkyl, carboxy, carboxamido, and cyano;

- $R^{10}$  and  $R^{12}$  are independently selected from the group consisting of hydrido, acetamido, haloacetamido, amidino, guanidino, alkyl, aryl, aralkyl, cycloalkyl, cycloalkylalkyl, heteroaryl, heterocyclyl, alkoxy, cycloalkoxy, cycloalkylalkoxy, aralkoxy, aryloxy, heteroaryloxy, heteroaralkoxy, heterocyclioxy, heterocyclylalkoxy, hydroxy, amino, alkoxyamino, alkylamino, arylamino, aralkylamino, heteroarylamino, heteroaralkylamino, heterocyclylamino, heterocyclylalkylamino, alkylsulfonamido, amidosulfonyl, arylsulfinyl, aralkylsulfinyl, cycloalkylsulfinyl, heteroarylsulfinyl, arylsulfonyl,

aralkylsulfonyl, cycloalkylsulfonyl, heteroarylsulfonyl, hydroxyalkyl, hydroxyhaloalkyl, aminoalkyl, carboalkoxy, carboxy, carboxyalkyl, carboxamido, halo, haloalkyl, and cyano;

A is a bond or  $(\text{CH}(\text{R}^{15}))_{\text{pa}}-(\text{W}^7)_{\text{rr}}$  wherein rr is 0 or 1, pa is an

- 5 integer selected from 0 through 3, and  $\text{W}^7$  is  $(\text{R}^7)\text{NC}(\text{O})$  or  $\text{N}(\text{R}^7)$ ;

$\text{R}^7$  is selected from the group consisting of hydrido, hydroxy and alkyl;

$\text{R}^{15}$  is selected from the group consisting of hydrido, halo, alkyl, and haloalkyl;

- $\text{X}^0$  is selected from the group consisting of hydrido, alkyl, cyano, halo, haloalkyl, haloalkoxy, amino, aminoalkyl, alkylamino, amidino, hydroxy, hydroxyamino, alkoxy, hydroxyalkyl, alkoxyamino, thiol, and alkylthio;

- 10 W, X, Y, and Z are independently selected from the group consisting of  $\text{C}(\text{R}^9)$ ,  $\text{C}(\text{R}^{10})$ ,  $\text{C}(\text{R}^{11})$ ,  $\text{C}(\text{R}^{12})$ , N,  $\text{N}(\text{R}^{10})$ , O, S and a bond with the proviso that one of W, X, Y, and Z is independently selected to be a bond when one of
- 15 W, X, Y, and Z is O or S, with the further proviso that no more than one of W, X, Y, and Z is optionally O or S, and with the additional proviso that no more than three of W, X, Y, and Z are optionally N or  $\text{N}(\text{R}^{10})$ ;

$\text{Y}^0$  is phenyl or a heteroaryl of 5 or 6 ring members, wherein one carbon of said phenyl or said heteroaryl is substituted by  $\text{Q}^{\text{s}}$ , a carbon two or three

- 20 contiguous atoms from the point of attachment of  $\text{Q}^{\text{s}}$  to the phenyl or heteroaryl ring is substituted by  $\text{Q}^{\text{b}}$ , a carbon adjacent to the point of attachment of  $\text{Q}^{\text{s}}$  is optionally substituted by  $\text{R}^{17}$ , another carbon adjacent to the point of attachment of  $\text{Q}^{\text{s}}$  is optionally substituted by  $\text{R}^{18}$ , a carbon adjacent to  $\text{Q}^{\text{b}}$  is optionally substituted by  $\text{R}^{16}$ , and another carbon adjacent to
- 25  $\text{Q}^{\text{b}}$  is optionally substituted by  $\text{R}^{19}$ ;

$R^{16}$ ,  $R^{17}$ ,  $R^{18}$ , and  $R^{19}$  are independently selected from the group consisting of hydrido, amidino, guanidino, carboxy, haloalkylthio, alkoxy, hydroxy, amino, alkylamino, alkylthio, alkylsulfinyl, alkylsulfonyl, alkanoyl, haloalkanoyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, aminoalkyl, and cyano;

$R^{16}$  or  $R^{19}$  is optionally selected from the group consisting of  $NR^{20}R^{21}$ ,  $N(R^{26})C(NR^{25})N(R^{23})(R^{24})$ , and  $C(NR^{25})NR^{23}R^{24}$ , with the proviso that  $R^{16}$ ,  $R^{19}$ , and  $Q^b$  are not simultaneously hydrido;

$Q^b$  is selected from the group consisting of  $NR^{20}R^{21}$ , hydrido,  $C(NR^{25})NR^{23}R^{24}$ , and  $N(R^{26})C(NR^{25})N(R^{23})(R^{24})$ , with the proviso that no more than one of  $R^{20}$  and  $R^{21}$  is hydroxy at the same time and with the further proviso that no more than one of  $R^{23}$  and  $R^{24}$  is hydroxy at the same time;

$R^{20}$ ,  $R^{21}$ ,  $R^{23}$ ,  $R^{24}$ ,  $R^{25}$ , and  $R^{26}$  are independently selected from the group consisting of hydrido, alkyl, and hydroxy;

$Q^s$  is selected from the group consisting of a bond,  $CH_2$ , and  $CH_2CH_2$ .

34. Compound of Claim 33 or a pharmaceutically acceptable salt thereof, wherein;

B is selected from the group consisting of phenyl, 2-thienyl, 3-thienyl, 2-furyl, 3-furyl, 2-pyrrolyl, 3-pyrrolyl, 2-imidazolyl, 4-imidazolyl, 3-pyrazolyl, 4-pyrazolyl, 2-thiazolyl, 3-isoxazolyl, 5-isoxazolyl, 2-pyridyl, 3-pyridyl, 4-pyridyl, 2-pyrazinyl, 2-pyrimidinyl, 4-pyrimidinyl, 5-pyrimidinyl, 3-pyridazinyl, 4-pyridazinyl, and 1,3,5-triazin-2-yl, wherein a carbon adjacent to the carbon at the point of attachment of said phenyl or heteroaryl ring to A is optionally substituted by  $R^{32}$ , the other carbon adjacent

to the carbon at the point of attachment is optionally substituted by  $R^{36}$ , a carbon adjacent to  $R^{32}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{33}$ , a carbon adjacent to  $R^{36}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{35}$ , and any carbon adjacent to both  $R^{33}$  and  $R^{35}$  is optionally substituted by  $R^{34}$ ;

$R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$  are independently selected from the group consisting of hydrido, amidino, guanidino, carboxy, methoxy, ethoxy, isopropoxy, propoxy, hydroxy, amino, methoxyamino, ethoxyamino, acetamido, trifluoroacetamido, N-methylamino, dimethylamino, N-ethylamino, methylthio, ethylthio, isopropylthio, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, 2,2,3,3,3-pentafluoropropyl, trifluoromethoxy, 1,1,2,2-tetrafluoroethoxy, fluoro, chloro, bromo, amidosulfonyl, N-methylamidosulfonyl, N,N-dimethylamidosulfonyl, hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl, 2,2,2-trifluoro-1-hydroxyethyl, methoxycarbonyl, ethoxycarbonyl, amidocarbonyl, N-methylamidocarbonyl, N,N-dimethylamidocarbonyl, cyano, and  $Q^b$ ;

B is optionally selected from the group consisting of hydrido, ethyl, 2-propenyl, 2-propynyl, propyl, isopropyl, butyl, 2-butenyl, 3-butenyl, 2-butyryl, sec-butyl, tert-butyl, isobutyl, 2-methylpropenyl, 1-pentyl, 2-pentenyl, 3-pentenyl, 4-pentenyl, 2-pentyryl, 3-pentyryl, 2-pentyl, 1-methyl-2-butenyl, 1-methyl-3-butenyl, 1-methyl-2-butyryl, 3-pentyl, 1-ethyl-2-propenyl, 2-methylbutyl, 2-methyl-2-butenyl, 2-methyl-3-butenyl, 2-methyl-3-butyryl, 3-methylbutyl, 3-methyl-2-butenyl, 3-methyl-3-butenyl, 1-hexyl, 2-hexenyl, 3-hexenyl, 4-hexenyl, 5-hexenyl, 2-hexynyl, 3-hexynyl, 4-hexynyl, 2-hexyl, 1-methyl-2-pentenyl, 1-methyl-3-pentenyl, 1-methyl-4-pentenyl, 1-methyl-2-pentyryl, 1-methyl-3-pentyryl, 3-hexyl, 1-ethyl-2-butenyl, 1-ethyl-3-butenyl, 1-propyl-2-propenyl, 1-ethyl-2-butyryl, 1-heptyl, 2-heptenyl, 3-heptenyl, 4-heptenyl, 5-heptenyl, 6-heptenyl, 2-heptyryl, 3-heptyryl, 4-heptyryl, 5-heptyryl, 2-heptyl, 1-methyl-2-hexenyl, 1-methyl-3-hexenyl, 1-methyl-4-hexenyl, 1-methyl-5-hexenyl,

- 1-methyl-2-hexynyl, 1-methyl-3-hexynyl, 1-methyl-4-hexynyl, 3-heptyl,  
 1-ethyl-2-pentenyl, 1-ethyl-3-pentenyl, 1-ethyl-4-pentenyl, 1-butyl-2-propenyl,  
 1-ethyl-2-pentynyl, 1-ethyl-3-pentynyl, 2,2,2-trifluoroethyl, 2,2-difluoropropyl,  
 4-trifluoromethyl-5,5,5-trifluoropentyl, 4-trifluoromethylpentyl,  
 5,5,6,6,6-pentafluorohexyl, and 3,3,3-trifluoropropyl, wherein each member of  
 group B is optionally substituted at any carbon up to and including 5 atoms  
 from the point of attachment of B to A with one or more of the group  
 consisting of  $R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$ ;

- B is optionally selected from the group consisting of cyclopropyl,  
 cyclobutyl, oxetan-3-yl, azetidin-1-yl, azetidin-2-yl, azetidin-3-yl, thiaetan-3-yl,  
 cyclopentyl, cyclohexyl, norbornyl, 7-oxabicyclo[2.2.1]heptan-2-yl,  
 bicyclo[3.1.0]hexan-6-yl, cycloheptyl, 2-morpholinyl, 3-morpholinyl,  
 4-morpholinyl, 1-piperazinyl, 2-piperazinyl, 1-piperidinyl, 2-piperidinyl,  
 3-piperidinyl, 4-piperidinyl, 1-pyrrolidinyl, 2-pyrrolidinyl, 3-pyrrolidinyl,  
 2-dioxanyl, 4H-2-pyranyl, 4H-3-pyranyl, 4H-4-pyranyl, 4H-pyran-4-one-2-yl,  
 4H-pyran-4-one-3-yl, 2-tetrahydrofuranyl, 3-tetrahydrofuranyl,  
 2-tetrahydropyranyl, 3-tetrahydropyranyl, 4-tetrahydropyranyl,  
 2-tetrahydrothienyl, and 3-tetrahydrothienyl, wherein each ring carbon is  
 optionally substituted with  $R^{33}$ , a ring carbon and nitrogen atoms adjacent to  
 the carbon atom at the point of attachment is optionally substituted with  $R^9$  or  
 $R^{13}$ , a ring carbon or nitrogen atom adjacent to the  $R^9$  position and two atoms  
 from the point of attachment is optionally substituted with  $R^{10}$ , and a ring  
 carbon or nitrogen atom adjacent to the  $R^{13}$  position and two atoms from the  
 point of attachment is optionally substituted with  $R^{12}$ ;

- $R^9$  and  $R^{13}$  are independently selected from the group consisting of  
 hydrido, amidino, guanidino, carboxy, methyl, ethyl, propyl, isopropyl, methoxy,  
 ethoxy, isopropoxy, propoxy, hydroxy, amino, N-methylamino,  
 N,N-dimethylamino, N-ethylamino, methylthio, ethylthio, isopropylthio,  
 trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl,

- 2,2,3,3,3-pentafluoropropyl, trifluoromethoxy, 1,1,2,2-tetrafluoroethoxy, fluoro, chloro, bromo, methanesulfonamido, amidosulfonyl, N-methylamidosulfonyl, N,N-dimethylamidosulfonyl, hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl, 2,2,2-trifluoro-1-hydroxyethyl, amidocarbonyl, N-methylamidocarbonyl, N,N-dimethylamidocarbonyl, and cyano;
- 5  $R^{10}$  and  $R^{12}$  are independently selected from the group consisting of hydrido, amidino, guanidino, carboxy, carboxymethyl, methyl, ethyl, propyl, isopropyl, methoxy, ethoxy, isopropoxy, propoxy, hydroxy, amino, methoxyamino, ethoxyamino, acetamido, trifluoroacetamido, aminomethyl,
- 10 1-aminoethyl, 2-aminoethyl, N-methylamino, dimethylamino, N-ethylamino, methanesulfonamido, amidosulfonyl, N-methylamidosulfonyl, N,N-dimethylamidosulfonyl, hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl, 2,2,2-trifluoro-1-hydroxyethyl, methoxycarbonyl, ethoxycarbonyl, amidocarbonyl, N-methylamidocarbonyl, N,N-dimethylamidocarbonyl,
- 15 N-benzylamidocarbonyl, N-(2-chlorobenzyl)amidocarbonyl, N-(3-fluorobenzyl)amidocarbonyl, N-(2-trifluoromethylbenzyl)amidocarbonyl, N-(1-phenylethyl)amidocarbonyl, N-(1-methyl-1-phenylethyl)amidocarbonyl, N-benzylamidosulfonyl, N-(2-chlorobenzyl)amidosulfonyl, N-ethylamidocarbonyl, N-isopropylamidocarbonyl, N-propylamidocarbonyl,
- 20 N-isobutylamidocarbonyl, N-(2-butyl)amidocarbonyl, N-cyclobutylamidocarbonyl, N-cyclopentylamidocarbonyl, N-cyclohexylamidocarbonyl, fluoro, chloro, bromo, cyano, cyclobutoxy, cyclohexoxy, cyclohexylmethoxy, 4-trifluoromethylcyclohexylmethoxy, cyclopentoxy, benzyloxy, 4-bromo-3-fluorophenoxy,
- 25 3-bromobenzyloxy, 4-bromobenzyloxy, 4-bromobenzylamino, 5-bromopyrid-2-ylmethylamino, 4-butoxyphenamino, 3-chlorobenzyl, 4-chlorophenoxy, 4-chloro-3-ethylphenoxy, 4-chloro-3-ethylbenzylamino, 4-chloro-3-ethylphenylamino, 3-chlorobenzyloxy, 4-chlorobenzyloxy, 4-chlorobenzylsulfonyl, 4-chlorophenylamino, 4-chlorophenylsulfonyl,
- 30 5-chloropyrid-3-yloxy, 2-cyanopyrid-3-yloxy, 2,3-difluorobenzyloxy, 2,4-difluorobenzyloxy, 3,4-difluorobenzyloxy, 2,5-difluorobenzyloxy, 3,5-difluorophenoxy, 3,5-difluorobenzyloxy, 4-difluoromethoxybenzyloxy, 2,3-difluorophenoxy, 2,4-difluorophenoxy, 2,5-difluorophenoxy, 3,5-dimethylphenoxy, 3,4-dimethylphenoxy, 3,4-dimethylbenzyloxy,

- 3,5-dimethylbenzyloxy, 4-ethoxyphenoxy, 4-ethylbenzyloxy, 3-ethylphenoxy, 4-ethylaminophenoxy, 3-ethyl-5-methylphenoxy, 4-fluorobenzyloxy, 2-fluoro-3-trifluoromethylbenzyloxy, 3-fluoro-5-trifluoromethylbenzyloxy, 4-fluoro-2-trifluoromethylbenzyloxy, 4-fluoro-3-trifluoromethylbenzyloxy, 5 2-fluorophenoxy, 4-fluorophenoxy, 2-fluoro-3-trifluoromethylphenoxy, 2-fluorobenzyloxy, 4-fluorophenylamino, 2-fluoro-4-trifluoromethylphenoxy, 4-isopropylbenzyloxy, 3-isopropylphenoxy, 4-isopropylphenoxy, 4-isopropyl-3-methylphenoxy, 4-isopropylbenzyloxy, 3-isopropylphenoxy, 4-isopropylphenoxy, 4-isopropyl-3-methylphenoxy, phenylamino, 10 1-phenylethoxy, 2-phenylethoxy, 2-phenylethyl, 2-phenylethylamino, phenylsulfonyl, 3-trifluoromethoxybenzyloxy, 4-trifluoromethoxybenzyloxy, 3-trifluoromethoxyphenoxy, 4-trifluoromethoxyphenoxy, 3-trifluoromethylbenzyloxy, 4-trifluoromethylbenzyloxy, 2,4-bis-trifluoromethylbenzyloxy, 3-trifluoromethylbenzyl, 15 3,5-bis-trifluoromethylbenzyloxy, 4-trifluoromethylphenoxy, 3-trifluoromethylphenoxy, 3-trifluoromethylthiobenzyloxy, 4-trifluoromethylthiobenzyloxy, 2,3,4-trifluorophenoxy, 2,3,5-trifluorophenoxy, 3-pentafluoroethylphenoxy, 3-(1,1,2,2-tetrafluoroethoxy)phenoxy, and 3-trifluoromethylthiophenoxy;

- 20 A is selected from the group consisting of a bond, NH, N(CH<sub>3</sub>), N(OH), CH<sub>2</sub>, CH<sub>3</sub>CH, CF<sub>3</sub>CH, NHC(O), N(CH<sub>3</sub>)C(O), C(O)NH, C(O)N(CH<sub>3</sub>), CH<sub>2</sub>CH<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>, CH<sub>3</sub>CHCH<sub>2</sub>, and CF<sub>3</sub>CHCH<sub>2</sub>;

- A is optionally selected from the group consisting of CH<sub>2</sub>N(CH<sub>3</sub>), CH<sub>2</sub>N(CH<sub>2</sub>CH<sub>3</sub>), CH<sub>2</sub>CH<sub>2</sub>N(CH<sub>3</sub>), and CH<sub>2</sub>CH<sub>2</sub>N(CH<sub>2</sub>CH<sub>3</sub>) with the 25 proviso that B is hydrido;

- X<sup>○</sup> is selected from the group consisting of hydrido, hydroxy, amino, amidino, hydroxyamino, aminomethyl, 1-aminoethyl, methylamino, dimethylamino, cyano, methyl, ethyl, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, methoxy, hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl, 30 methoxyamino, methylthio, ethylthio, trifluoromethoxy, 1,1,2,2-tetrafluoroethoxy, fluoro, chloro, and bromo;

W, X, Y, and Z are independently selected from the group consisting of  
CH, N, CF, CCl, C-CN, C-CH<sub>3</sub>, C-CH<sub>2</sub>CH<sub>3</sub>, C-NH<sub>2</sub>, C-CH<sub>2</sub>NH<sub>2</sub>,

C-CH<sub>2</sub>NHCH<sub>3</sub>, C-NHCH<sub>3</sub>, C-N(CH<sub>3</sub>)<sub>2</sub>, C-CH(NH<sub>2</sub>)CH<sub>3</sub>,

C-CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>, C-NHOCH<sub>3</sub>, C-NHOCH<sub>2</sub>CH<sub>3</sub>, C-C(NH)NH<sub>2</sub>,

5 C-C(NOH)NH<sub>2</sub>, C-OH, C-CH<sub>2</sub>OH, C-CH<sub>2</sub>CH<sub>2</sub>OH, C-CH(OH)CH<sub>3</sub>,

C-OCH<sub>3</sub>, C-OCH<sub>2</sub>CH<sub>3</sub>, C-CO<sub>2</sub>H, C-CO<sub>2</sub>CH<sub>3</sub>, C-C(O)NH<sub>2</sub>,

C-C(O)NHCH<sub>3</sub>, C-C(O)N(CH<sub>3</sub>)<sub>2</sub>, N-benzylamidocarbonyl-C,

N-(2-chlorobenzyl)amidocarbonyl-C, N-(3-fluorobenzyl)amidocarbonyl-C,

N-(2-trifluoromethylbenzyl)amidocarbonyl-C,

10 N-(1-phenylethyl)amidocarbonyl-C,

N-(1-methyl-1-phenylethyl)amidocarbonyl-C, N-benzylamidosulfonyl-C,

N-(2-chlorobenzyl)amidosulfonyl-C, N-ethylamidocarbonyl-C,

N-isopropylamidocarbonyl-C, N-propylamidocarbonyl-C,

N-isobutylamidocarbonyl-C, N-(2-butyl)amidocarbonyl-C,

15 N-cyclobutylamidocarbonyl-C, N-cyclopentylamidocarbonyl-C,

N-cyclohexylamidocarbonyl-C, C-NH(O)CCH<sub>3</sub>, and C-NH(O)CCF<sub>3</sub>;

Y<sup>0</sup> is selected from the group consisting of:

1-Q<sup>b</sup>-4-Q<sup>s</sup>-2-R<sup>16</sup>-3-R<sup>17</sup>-5-R<sup>18</sup>-6-R<sup>19</sup> benzene,

2-Q<sup>b</sup>-5-Q<sup>s</sup>-6-R<sup>17</sup>-4-R<sup>18</sup>-3-R<sup>19</sup> pyridine,

20 3-Q<sup>b</sup>-6-Q<sup>s</sup>-2-R<sup>16</sup>-5-R<sup>18</sup>-4-R<sup>19</sup> pyridine, 2-Q<sup>b</sup>-5-Q<sup>s</sup>-3-R<sup>16</sup>-6-R<sup>18</sup> pyrazine,

3-Q<sup>b</sup>-6-Q<sup>s</sup>-2-R<sup>18</sup>-5-R<sup>18</sup>-4-R<sup>19</sup> pyridazine,

2-Q<sup>b</sup>-5-Q<sup>s</sup>-4-R<sup>17</sup>-6-R<sup>18</sup> pyrimidine, 5-Q<sup>b</sup>-2-Q<sup>s</sup>-4-R<sup>16</sup>-6-R<sup>19</sup> pyrimidine,

3-Q<sup>b</sup>-5-Q<sup>s</sup>-4-R<sup>16</sup>-2-R<sup>19</sup> thiophene, 2-Q<sup>b</sup>-5-Q<sup>s</sup>-3-R<sup>16</sup>-4-R<sup>17</sup> thiophene,

3-Q<sup>b</sup>-5-Q<sup>s</sup>-4-R<sup>16</sup>-2-R<sup>19</sup> furan, 2-Q<sup>b</sup>-5-Q<sup>s</sup>-3-R<sup>16</sup>-4-R<sup>17</sup> furan,

25 3-Q<sup>b</sup>-5-Q<sup>s</sup>-4-R<sup>16</sup>-2-R<sup>19</sup> pyrrole, 2-Q<sup>b</sup>-5-Q<sup>s</sup>-3-R<sup>16</sup>-4-R<sup>17</sup> pyrrole,

4-Q<sup>b</sup>-2-Q<sup>s</sup>-5-R<sup>19</sup> imidazole, 2-Q<sup>b</sup>-4-Q<sup>s</sup>-5-R<sup>17</sup> imidazole,



3-Q<sup>b</sup>-5-Q<sup>s</sup>-4-R<sup>16</sup> isoxazole, 5-Q<sup>b</sup>-3-Q<sup>s</sup>-4-R<sup>16</sup> isoxazole,  
 2-Q<sup>b</sup>-5-Q<sup>s</sup>-4-R<sup>16</sup> pyrazole, 4-Q<sup>b</sup>-2-Q<sup>s</sup>-5-R<sup>19</sup> thiazole, and  
 2-Q<sup>b</sup>-5-Q<sup>s</sup>-4-R<sup>17</sup> thiazole;

R<sup>16</sup>, R<sup>17</sup>, R<sup>18</sup>, and R<sup>19</sup> are independently selected from the group

- 5 consisting of hydrido, methyl, ethyl, isopropyl, propyl, carboxy, amidino, guanidino, methoxy, ethoxy, isopropoxy, propoxy, hydroxy, amino, aminomethyl, 1-aminoethyl, 2-aminoethyl, N-methylamino, dimethylamino, N-ethylamino, methylthio, ethylthio, isopropylthio, trifluoromethylthio, methylsulfinyl, ethylsulfinyl, methylsulfonyl, ethylsulfonyl, trifluoromethyl, 10 pentafluoroethyl, 2,2,2-trifluoroethyl, 2,2,3,3,3-pentafluoropropyl, trifluoromethoxy, 1,1,2,2-tetrafluoroethoxy, fluoro, chloro, bromo, hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl, and cyano;

R<sup>16</sup> or R<sup>19</sup> is optionally selected from the group consisting of NR<sup>20</sup>R<sup>21</sup>, C(NR<sup>25</sup>)NR<sup>23</sup>R<sup>24</sup>, and N(R<sup>26</sup>)C(NR<sup>25</sup>)N(R<sup>23</sup>)(R<sup>24</sup>), with the proviso that R<sup>16</sup>,

- 15 R<sup>19</sup>, and Q<sup>b</sup> are not simultaneously hydrido;

Q<sup>b</sup> is selected from the group consisting of NR<sup>20</sup>R<sup>21</sup>, hydrido, C(NR<sup>25</sup>)NR<sup>23</sup>R<sup>24</sup>, and N(R<sup>26</sup>)C(NR<sup>25</sup>)N(R<sup>23</sup>)(R<sup>24</sup>), with the proviso that no more than one of R<sup>20</sup> and R<sup>21</sup> is hydroxy at the same time and with the further proviso that no more than one of R<sup>23</sup> and R<sup>24</sup> is hydroxy at the same time;

- 20 R<sup>20</sup>, R<sup>21</sup>, R<sup>23</sup>, R<sup>24</sup>, R<sup>25</sup>, and R<sup>26</sup> are independently selected from the group consisting of hydrido, methyl, ethyl, propyl, butyl, isopropyl, and hydroxy;

Q<sup>s</sup> is selected from the group consisting of a bond, CH<sub>2</sub>, and CH<sub>2</sub>CH<sub>2</sub>.

35. Compound of Claim 34 or a pharmaceutically acceptable salt thereof,  
 25 wherein;

B is selected from the group consisting of 2-aminophenyl, 3-aminophenyl, 3-amidinophenyl, 4-amidinophenyl, 3-carboxyphenyl,

- 3-carboxy-5-hydroxyphenyl, 3-chlorophenyl, 4-chlorophenyl,  
 3,4-dichlorophenyl, 2-fluorophenyl, 3-fluorophenyl, 3,4-difluorophenyl,  
 3-hydroxyphenyl, 4-hydroxyphenyl, 3-methoxyaminophenyl,  
 3-methoxyphenyl, 4-methoxyphenyl, 3-methylphenyl, 4-methylphenyl, phenyl,  
 5 3-trifluoromethylphenyl, 2-imidazolyl, 2-pyridyl, 3-pyridyl,  
 5-chloro-3-trifluoromethyl-2-pyridyl, 4-pyridyl, 2-thienyl, 3-thienyl, and  
 3-trifluoromethyl-2-pyridyl;

- B is optionally selected from the group consisting of hydrido, ethyl,  
 2-propenyl, 2-propynyl, propyl, isopropyl, butyl, 2-butyl, (R)-2-butyl,  
 10 (S)-2-butyl, tert-butyl, isobutyl, 1-pentyl, 3-pentyl, 2-methylbutyl,  
 2,2,2-trifluoroethyl, 6-amidocarbonylhexyl, 4-methyl-2-pentyl,  
 3-hydroxypropyl, 1-methoxy-2-propyl, 2-methoxyethyl, 2-methyl-2-butyl,  
 3-methyl-2-butyl, 2-dimethylaminopropyl, 2-cyanoethyl, 6-hydroxyhexyl,  
 2-hydroxyethyl, 2-amidinoethyl, 2-guanidinoethyl, 3-guanidinopropyl,  
 15 4-guanidinobutyl, 3-hydroxypropyl, 4-hydroxybutyl, 6-cyanoethyl,  
 2-dimethylaminoethyl, 3-methylbutyl, 2-methylbutyl, (S)-2-methylbutyl,  
 3-aminopropyl, 2-hexyl, and 4-aminobutyl;

- B is optionally selected from the group consisting of cyclopropyl,  
 cyclobutyl, cyclopentyl, cyclohexyl, cycloheptyl, oxalan-2-yl,  
 20 2-(2R)-bicyclo[2.2.1]-heptyl, 1-pyrrolidinyl, 1-piperidinyl, oxetan-3-yl,  
 azetidin-1-yl, azetidin-2-yl, azetidin-3-yl, 7-oxabicyclo[2.2.1]heptan-2-yl,  
 bicyclo[3.1.0]hexan-6-yl, 2-morpholinyl, 3-morpholinyl, 4-morpholinyl,  
 1-piperazinyl, 2-piperazinyl, 1-piperidinyl, 2-piperidinyl, 3-piperidinyl,  
 4-piperidinyl, 1-pyrrolidinyl, 2-pyrrolidinyl, 3-pyrrolidinyl, 2-dioxanyl,  
 25 4H-2-pyranyl, 4H-3-pyranyl, 4H-4-pyranyl, 4H-pyran-4-one-2-yl,  
 4H-pyran-4-one-3-yl, 2-tetrahydrofuranyl, 3-tetrahydrofuranyl,  
 2-tetrahydropyranyl, 3-tetrahydropyranyl, 4-tetrahydropyranyl,  
 2-tetrahydrothienyl, and 3-tetrahydrothienyl;

- A is selected from the group consisting of a bond, CH<sub>2</sub>, NHC(O),  
 30 CH<sub>2</sub>CH<sub>2</sub>, and CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>;

X<sup>O</sup> is selected from the group consisting of hydrido, hydroxy, amino,  
 amidino, hydroxyamino, aminomethyl, methylamino, cyano, methyl,  
 trifluoromethyl, methoxy, hydroxymethyl, methoxyamino, methylthio,  
 trifluoromethoxy, fluoro, and chloro;

W and Z are independently selected from the group consisting of CH, N, CF, CCl, C-CN, C-NH<sub>2</sub>, C-CH<sub>2</sub>NH<sub>2</sub>, C-NHCH<sub>3</sub>, C-OH, C-CH<sub>2</sub>OH, C-CO<sub>2</sub>H, and C-C(O)NH<sub>2</sub>;

- X and Y are independently selected from the group consisting of CH, N,
- 5 CF, C-CN, C-CH<sub>3</sub>, C-NH<sub>2</sub>, C-CH<sub>2</sub>NH<sub>2</sub>, C-CH<sub>2</sub>NHCH<sub>3</sub>, C-NHCH<sub>3</sub>, C-CH(NH<sub>2</sub>)CH<sub>3</sub>, C-CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>, C-NHOCH<sub>3</sub>, C-C(NH)NH<sub>2</sub>, C-C(NOH)NH<sub>2</sub>, C-OH, C-CH<sub>2</sub>OH, C-CH<sub>2</sub>CH<sub>2</sub>OH, C-CH(OH)CH<sub>3</sub>, C-OCH<sub>3</sub>, C-CO<sub>2</sub>H, C-C(O)NH<sub>2</sub>, C-C(O)NHCH<sub>3</sub>, C-CH<sub>2</sub>CO<sub>2</sub>H, N-benzylamidocarbonyl-C, N-(2-chlorobenzyl)amidocarbonyl-C,
- 10 N-(3-fluorobenzyl)amidocarbonyl-C, N-(2-trifluoromethylbenzyl)amidocarbonyl-C, N-(1-phenylethyl)amidocarbonyl-C, N-(1-methyl-1-phenylethyl)amidocarbonyl-C, N-benzylamidosulfonyl-C, N-(2-chlorobenzyl)amidosulfonyl-C, N-ethylamidocarbonyl-C,
- 15 N-isopropylamidocarbonyl-C, N-propylamidocarbonyl-C, N-isobutylamidocarbonyl-C, N-(2-butyl)amidocarbonyl-C, N-cyclobutylamidocarbonyl-C, N-cyclopentylamidocarbonyl-C, N-cyclohexylamidocarbonyl-C;

Y<sup>0</sup> is selected from the group consisting of:

- 20 1-Q<sup>b</sup>-4-Q<sup>s</sup>-2-R<sup>16</sup>-3-R<sup>17</sup>-5-R<sup>18</sup>-6-R<sup>19</sup> benzene,  
2-Q<sup>b</sup>-5-Q<sup>s</sup>-6-R<sup>17</sup>-4-R<sup>18</sup>-3-R<sup>19</sup> pyridine,  
3-Q<sup>b</sup>-6-Q<sup>s</sup>-2-R<sup>16</sup>-5-R<sup>18</sup>-4-R<sup>19</sup> pyridine,  
3-Q<sup>b</sup>-5-Q<sup>s</sup>-4-R<sup>16</sup>-2-R<sup>19</sup> thiophene, and 2-Q<sup>b</sup>-5-Q<sup>s</sup>-3-R<sup>16</sup>-4-R<sup>17</sup> thiophene;

R<sup>16</sup> and R<sup>19</sup> are independently selected from the group consisting of

- 25 hydrido, amidino, amino, aminomethyl, methoxy, methylamino, hydroxy, hydroxymethyl, fluoro, chloro, and cyano;

R<sup>16</sup> or R<sup>19</sup> is optionally C(NR<sup>25</sup>)NR<sup>23</sup>R<sup>24</sup> with the proviso that R<sup>16</sup>,

R<sup>19</sup>, and Q<sup>b</sup> are not simultaneously hydrido;

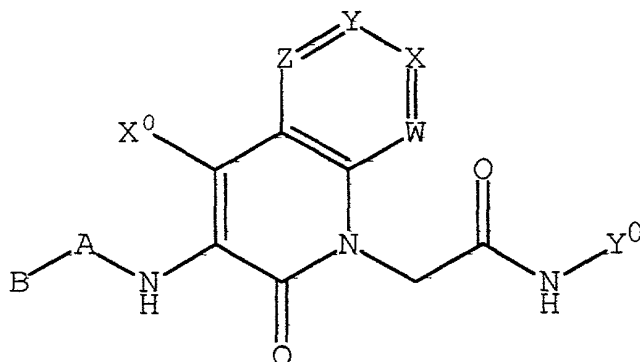
$R^{17}$  and  $R^{18}$  are independently selected from the group consisting of hydrido, fluoro, chloro, hydroxy, hydroxymethyl, amino, carboxy, and cyano;

$Q^b$  is  $C(NR^{25})NR^{23}R^{24}$  or hydrido;

$R^{23}$ ,  $R^{24}$ , and  $R^{25}$  are independently hydrido or methyl;

5  $Q^s$  is  $CH_2$ .

36. Compound of Claim 33 of the Formula:



or a pharmaceutically acceptable salt thereof, wherein;

10 B is phenyl or a heteroaryl of 5 or 6 ring members, wherein a carbon adjacent to the carbon at the point of attachment of said phenyl or heteroaryl ring to A is optionally substituted by  $R^{32}$ , the other carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^{36}$ , a carbon adjacent to  $R^{32}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{33}$ , a carbon adjacent to  $R^{36}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{35}$ , and any carbon adjacent to both  $R^{33}$  and  $R^{35}$  is optionally substituted by  $R^{34}$ ;

15  $R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$  are independently selected from the group consisting of hydrido, acetamido, haloacetamido, amidino, guanidino, alkoxy, hydroxy, amino, alkoxyamino, alkylamino, alkylthio, amidosulfonyl,

alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, carboalkoxy, carboxy, carboxamido, cyano, and  $Q^b$ ;

B is optionally selected from the group consisting of hydrido, C2-C8 alkyl, C3-C8 alkenyl, C3-C8 alkynyl, and C2-C8 haloalkyl, wherein each member of group B is optionally substituted at any carbon up to and including 6 atoms from the point of attachment of B to A with one or more of the group consisting of  $R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$ ;

B is optionally a C3-C7 cycloalkyl or C4-C6 saturated heterocyclyl, wherein each ring carbon is optionally substituted with  $R^{33}$ , a ring carbon other than the ring carbon at the point of attachment of B to A is optionally substituted with oxo provided that no more than one ring carbon is substituted by oxo at the same time, ring carbons and nitrogen adjacent to the carbon atom at the point of attachment are optionally substituted with  $R^9$  or  $R^{13}$ , a ring carbon or nitrogen adjacent to the  $R^9$  position and two atoms from the point of attachment is optionally substituted with  $R^{10}$ , a ring carbon or nitrogen adjacent to the  $R^{13}$  position and two atoms from the point of attachment is optionally substituted with  $R^{12}$ , a ring carbon or nitrogen three atoms from the point of attachment and adjacent to the  $R^{10}$  position is optionally substituted with  $R^{11}$ , a ring carbon or nitrogen three atoms from the point of attachment and adjacent to the  $R^{12}$  position is optionally substituted with  $R^{33}$ , and a ring carbon or nitrogen four atoms from the point of attachment and adjacent to the  $R^{11}$  and  $R^{33}$  positions is optionally substituted with  $R^{34}$ ;

$R^9$ ,  $R^{11}$ , and  $R^{13}$  are independently selected from the group consisting of hydrido, hydroxy, amino, amidino, guanidino, alkylamino, alkylthio, alkoxy, alkylsulfinyl, alkylsulfonyl, amidosulfonyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, carboxy, carboxamido, and cyano;

$R^{10}$  and  $R^{12}$  are independently selected from the group consisting of hydrido, acetamido, haloacetamido, amidino, guanidino, alkyl, alkoxy, alkoxyamino, hydroxy, amino, alkylamino, alkylsulfonamido, amidosulfonyl, hydroxyalkyl, aminoalkyl, halo, haloalkyl, carboalkoxy, carboxy, carboxamido, carboxyalkyl, and cyano;

A is a bond or  $(CH(R^{15}))_{pa}-(W^7)_{rr}$  wherein  $rr$  is 0 or 1,  $pa$  is an integer selected from 0 through 3, and  $W^7$  is  $N(R^7)$ ;

$R^7$  is selected from the group consisting of hydrido, hydroxy and alkyl;

$R^{15}$  is selected from the group consisting of hydrido, halo, alkyl, and

haloalkyl;

$X^0$  is selected from the group consisting of hydrido, alkyl, cyano, halo, haloalkyl, haloalkoxy, amino, aminoalkyl, alkylamino, amidino, hydroxy, hydroxyamino, alkoxy, hydroxyalkyl, alkoxyamino, thiol, and alkylthio;

W, X, Y, and Z are independently selected from the group consisting of  $C(R^9)$ ,  $C(R^{10})$ ,  $C(R^{11})$ ,  $C(R^{12})$ , and N with the proviso that no more than three of W, X, Y, and Z are N at the same time;

$Y^0$  is phenyl or a heteroaryl of 5 or 6 ring members, wherein one carbon of said phenyl or said heteroaryl is substituted by  $Q^s$ , a carbon two or three contiguous atoms from the point of attachment of  $Q^s$  to the phenyl or

heteroaryl ring is substituted by  $Q^b$ , a carbon adjacent to the point of attachment of  $Q^s$  is optionally substituted by  $R^{17}$ , another carbon adjacent to the point of attachment of  $Q^s$  is optionally substituted by  $R^{18}$ , a carbon adjacent to  $Q^b$  is optionally substituted by  $R^{16}$ , and another carbon adjacent to  $Q^b$  is optionally substituted by  $R^{19}$ ;

- $R^{16}$ ,  $R^{17}$ ,  $R^{18}$ , and  $R^{19}$  are independently selected from the group consisting of hydrido, amidino, guanidino, carboxy, haloalkylthio, alkoxy, hydroxy, amino, alkylamino, alkylthio, alkylsulfinyl, alkylsulfonyl, alkanoyl, haloalkanoyl, alkyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, aminoalkyl, and cyano;
- $R^{16}$  or  $R^{19}$  is optionally selected from the group consisting of  $NR^{20}R^{21}$ ,  $N(R^{26})C(NR^{25})N(R^{23})(R^{24})$ , and  $C(NR^{25})NR^{23}R^{24}$ , with the proviso that  $R^{16}$ ,  $R^{19}$ , and  $Q^b$  are not simultaneously hydrido;
- $Q^b$  is selected from the group consisting of  $NR^{20}R^{21}$ , hydrido,  $N(R^{26})C(NR^{25})N(R^{23})(R^{24})$ , and  $C(NR^{25})NR^{23}R^{24}$ ;
- $R^{20}$ ,  $R^{21}$ ,  $R^{23}$ ,  $R^{24}$ ,  $R^{25}$ , and  $R^{26}$  are independently hydrido or alkyl;
- $Q^s$  is  $CH_2$ .

37. Compound of Claim 36 or a pharmaceutically acceptable salt thereof, wherein;
- B is selected from the group consisting of phenyl, 2-thienyl, 3-thienyl, 2-furyl, 3-furyl, 2-pyrrolyl, 3-pyrrolyl, 2-imidazolyl, 4-imidazolyl, 3-pyrazolyl, 4-pyrazolyl, 2-thiazolyl, 3-isoxazolyl, and 5-isoxazolyl, wherein a carbon adjacent to the carbon at the point of attachment of said phenyl or heteroaryl ring to A is optionally substituted by  $R^{32}$ , the other carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^{36}$ , a carbon adjacent to  $R^{32}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{33}$ , a carbon adjacent to  $R^{36}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{35}$ , and any carbon adjacent to both  $R^{33}$  and  $R^{35}$  is optionally substituted by  $R^{34}$ ;

$R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$  are independently selected from the

- group consisting of hydrido, amidino, guanidino, methyl, ethyl, methoxy, ethoxy, hydroxy, amino, N-methylamino, dimethylamino, methoxyamino, methylthio, ethylthio, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, fluoro, chloro, bromo, amidosulfonyl, N-methylamidosulfonyl, hydroxymethyl, amidocarbonyl, carboxy, cyano, and  $Q^b$ ;

- B is optionally selected from the group consisting of hydrido, ethyl, 2-propenyl, 2-propynyl, propyl, isopropyl, butyl, 2-butenyl, 2-butylnyl, sec-butyl, tert-butyl, isobutyl, 2-methylpropenyl, 1-pentyl, 2-pentenyl, 3-pentenyl, 2-pentynyl, 3-pentynyl, 2-pentyl, 3-pentyl, 2-methylbutyl, 2-methyl-2-butenyl, 3-methylbutyl, 3-methyl-2-butenyl, 1-hexyl, 2-hexenyl, 3-hexenyl, 4-hexenyl, 2-hexynyl, 3-hexynyl, 4-hexynyl, 2-hexyl, 1-methyl-2-pentenyl, 1-methyl-3-pentenyl, 1-methyl-2-pentynyl, 1-methyl-3-pentynyl, 3-hexyl, 1-ethyl-2-butenyl, 1-heptyl, 2-heptenyl, 3-heptenyl, 4-heptenyl, 5-heptenyl, 2-heptynyl, 3-heptynyl, 4-heptynyl, 5-heptynyl, 2-heptyl, 1-methyl-2-hexenyl, 1-methyl-3-hexenyl, 1-methyl-4-hexenyl, 1-methyl-2-hexynyl, 1-methyl-3-hexynyl, 1-methyl-4-hexynyl, 3-heptyl, 1-ethyl-2-pentenyl, 1-ethyl-3-pentenyl, 1-ethyl-2-pentynyl, 1-ethyl-3-pentynyl, 2,2,2-trifluoroethyl, 2,2-difluoropropyl, 4-trifluoromethyl-5,5,5-trifluoropentyl, 4-trifluoromethylpentyl, 5,5,6,6,6-pentafluorohexyl, and 3,3,3-trifluoropropyl, wherein each member of group B is optionally substituted at any carbon up to and including 5 atoms from the point of attachment of B to A with one or more of the group consisting of  $R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$ ;

- B is selected from the group consisting of cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, cycloheptyl, oxalan-2-yl, 2-(2R)-bicyclo[2.2.1]-heptyl, oxetan-3-yl, azetidin-1-yl, azetidin-2-yl, azetidin-3-yl, bicyclo[3.1.0]hexan-6-yl, 2-morpholinyl, 3-morpholinyl, 4-morpholinyl, 1-piperazinyl, 2-piperazinyl, 1-piperidinyl, 2-piperidinyl, 3-piperidinyl, 4-piperidinyl, 1-pyrrolidinyl, 2-pyrrolidinyl, 3-pyrrolidinyl, 2-dioxanyl, 2-tetrahydrofuran-yl, 3-tetrahydrofuran-yl, 2-tetrahydropyran-yl, 3-tetrahydropyran-yl, 4-tetrahydropyran-yl, 2-tetrahydrothienyl, and 3-tetrahydrothienyl, wherein each ring carbon is optionally substituted with  $R^{33}$ , ring carbons and a nitrogen



adjacent to the carbon atom at the point of attachment are optionally substituted with  $R^9$  or  $R^{13}$ , a ring carbon or nitrogen adjacent to the  $R^9$  position and two atoms from the point of attachment are optionally substituted with  $R^{10}$ , and a ring carbon or nitrogen atom adjacent to the  $R^{13}$  position and two atoms from the point of attachment is optionally substituted with  $R^{12}$ ;

- $R^9$  and  $R^{13}$  are independently selected from the group consisting of hydrido, methyl, ethyl, methoxy, ethoxy, hydroxy, amino, N-methylamino, N,N-dimethylamino, methylthio, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, fluoro, chloro, bromo, amidosulfonyl, N-methylamidodisulfonyl, N,N-dimethylamidodisulfonyl, hydroxymethyl, 1-hydroxyethyl, amidocarbonyl, N-methylamidocarbonyl, carboxy, and cyano;
- $R^{10}$  and  $R^{12}$  are independently selected from the group consisting of hydrido, amidino, amidocarbonyl, N-methylamidocarbonyl, N-benzylamidocarbonyl, N-(2-chlorobenzyl)amidocarbonyl, N-(3-fluorobenzyl)amidocarbonyl, N-(2-trifluoromethylbenzyl)amidocarbonyl, N-(1-phenylethyl)amidocarbonyl, N-(1-methyl-1-phenylethyl)amidocarbonyl, N-benzylamidodisulfonyl, N-(2-chlorobenzyl)amidodisulfonyl, N-ethylamidocarbonyl, N-isopropylamidocarbonyl, N-propylamidocarbonyl, N-isobutylamidocarbonyl, N-(2-butyl)amidocarbonyl, N-cyclobutylamidocarbonyl, N-cyclopentylamidocarbonyl, N-cyclohexylamidocarbonyl, guanidino, methyl, ethyl, methoxy, ethoxy, hydroxy, hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl, carboxy, carboxymethyl, amino, acetamido, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, trifluoroacetamido, aminomethyl, N-methylamino, dimethylamino, methoxyamino, amidosulfonyl, N-methylamidodisulfonyl, N,N-dimethylamidodisulfonyl, methanesulfonamido, methoxycarbonyl, fluoro, chloro, bromo, and cyano;

A is selected from the group consisting of a bond, NH, N(CH<sub>3</sub>), CH<sub>2</sub>, CH<sub>3</sub>CH, and CH<sub>2</sub>CH<sub>2</sub>;

A is optionally selected from the group consisting of  $\text{CH}_2\text{N}(\text{CH}_3)$ ,  $\text{CH}_2\text{N}(\text{CH}_2\text{CH}_3)$ ,  $\text{CH}_2\text{CH}_2\text{N}(\text{CH}_3)$ , and  $\text{CH}_2\text{CH}_2\text{N}(\text{CH}_2\text{CH}_3)$  with the proviso that B is hydrido;

$\text{X}^\circ$  is selected from the group consisting of hydrido, hydroxy, amino, amidino, aminomethyl, cyano, methyl, trifluoromethyl, hydroxymethyl, chloro, and fluoro;

W and Z are independently selected from the group consisting of CH, N, CF, CCl, C-CN, C-NH<sub>2</sub>, C-CH<sub>2</sub>NH<sub>2</sub>, C-NHCH<sub>3</sub>, C-OH, C-CH<sub>2</sub>OH, C-CO<sub>2</sub>H, and C-C(O)NH<sub>2</sub>;

X and Y are independently selected from the group consisting of CH, N, CF, C-CN, C-CH<sub>3</sub>, C-NH<sub>2</sub>, C-CH<sub>2</sub>NH<sub>2</sub>, C-CH<sub>2</sub>NHCH<sub>3</sub>, C-NHCH<sub>3</sub>, C-CH(NH<sub>2</sub>)CH<sub>3</sub>, C-CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>, C-NHOCH<sub>3</sub>, C-C(NH)NH<sub>2</sub>, C-C(NOH)NH<sub>2</sub>, C-OH, C-CH<sub>2</sub>OH, C-CH<sub>2</sub>CH<sub>2</sub>OH, C-CH(OH)CH<sub>3</sub>, C-OCH<sub>3</sub>, C-CO<sub>2</sub>H, C-C(O)NH<sub>2</sub>, C-C(O)NHCH<sub>3</sub>, C-CH<sub>2</sub>CO<sub>2</sub>H, N-benzylamidocarbonyl-C, N-(2-chlorobenzyl)amidocarbonyl-C, N-(3-fluorobenzyl)amidocarbonyl-C, N-(2-trifluoromethylbenzyl)amidocarbonyl-C, N-(1-phenylethyl)amidocarbonyl-C, N-(1-methyl-1-phenylethyl)amidocarbonyl-C, N-benzylamidosulfonyl-C, N-(2-chlorobenzyl)amidosulfonyl-C, N-ethylamidocarbonyl-C, N-isopropylamidocarbonyl-C, N-propylamidocarbonyl-C, N-isobutylamidocarbonyl-C, N-(2-butyl)amidocarbonyl-C, N-cyclobutylamidocarbonyl-C, N-cyclopentylamidocarbonyl-C, N-cyclohexylamidocarbonyl-C;

$\text{Y}^0$  is selected from the group consisting of:

$1-Q^b-4-Q^s-2-R^{16}-3-R^{17}-5-R^{18}-6-R^{19}$  benzene,  
 $2-Q^b-5-Q^s-6-R^{17}-4-R^{18}-3-R^{19}$  pyridine,  $2-Q^b-5-Q^s-3-R^{16}-4-R^{17}$  thiophene,  
 $3-Q^b-6-Q^s-2-R^{16}-5-R^{18}-4-R^{19}$  pyridine,  $3-Q^b-5-Q^s-4-R^{16}-2-R^{19}$  thiophene,  
 $3-Q^b-5-Q^s-4-R^{16}-2-R^{19}$  furan,  $2-Q^b-5-Q^s-3-R^{16}-4-R^{17}$  furan,

3-Q<sup>b</sup>-5-Q<sup>s</sup>-4-R<sup>16</sup>-2-R<sup>19</sup> pyrrole, 2-Q<sup>b</sup>-5-Q<sup>s</sup>-3-R<sup>16</sup>-4-R<sup>17</sup> pyrrole,  
4-Q<sup>b</sup>-2-Q<sup>s</sup>-5-R<sup>19</sup> thiazole, and 2-Q<sup>b</sup>-5-Q<sup>s</sup>-4-R<sup>17</sup> thiazole;

R<sup>16</sup>, R<sup>17</sup>, R<sup>18</sup>, and R<sup>19</sup> are independently selected from the group

consisting of hydrido, methyl, ethyl, amidino, guanidino, methoxy, hydroxy,  
5 amino, aminomethyl, 1-aminoethyl, 2-aminoethyl, N-methylamino,  
dimethylamino, methylthio, ethylthio, trifluoromethylthio, methylsulfinyl,  
methylsulfonyl, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl,  
trifluoromethoxy, fluoro, chloro, hydroxymethyl, carboxy, and cyano;

Q<sup>b</sup> is selected from the group consisting of NR<sup>20</sup>R<sup>21</sup>,

10 C(NR<sup>25</sup>)NR<sup>23</sup>R<sup>24</sup>, and N(R<sup>26</sup>)C(NR<sup>25</sup>)N(R<sup>23</sup>)(R<sup>24</sup>), with the proviso that  
said Q<sup>b</sup> group is bonded directly to a carbon atom;

R<sup>20</sup>, R<sup>21</sup>, R<sup>23</sup>, R<sup>24</sup>, R<sup>25</sup>, and R<sup>26</sup> are independently selected from the

group consisting of hydrido, methyl, and ethyl;

Q<sup>s</sup> is CH<sub>2</sub>.

15

38. Compound of Claim 37 or a pharmaceutically acceptable salt thereof,  
wherein;

B is selected from the group consisting of 2-aminophenyl,

3-aminophenyl, 3-amidinophenyl, 4-amidinophenyl, 3-carboxyphenyl,

20 3-carboxy-5-hydroxyphenyl, 3-chlorophenyl, 4-chlorophenyl,

3,4-dichlorophenyl, 2-fluorophenyl, 3-fluorophenyl, 3,4-difluorophenyl,

3-hydroxyphenyl, 4-hydroxyphenyl, 3-methoxyaminophenyl,

3-methoxyphenyl, 4-methoxyphenyl, 3-methylphenyl, 4-methylphenyl, phenyl,

3-trifluoromethylphenyl, 2-imidazolyl, 2-pyridyl, 3-pyridyl,

25 5-chloro-3-trifluoromethyl-2-pyridyl, 4-pyridyl, 2-thienyl, 3-thienyl, and

3-trifluoromethyl-2-pyridyl;

B is optionally selected from the group consisting of hydrido, ethyl,

2-propenyl, 2-propynyl, propyl, isopropyl, butyl, 2-butyl, (R)-2-butyl,

(S)-2-butyl, tert-butyl, isobutyl, 1-pentyl, 3-pentyl, 2-methylbutyl,

30 2,2,2-trifluoroethyl, 6-amidocarbonylhexyl, 4-methyl-2-pentyl,

- 3-hydroxypropyl, 1-methoxy-2-propyl, 2-methoxyethyl, 2-methyl-2-butyl,  
3-methyl-2-butyl, 2-dimethylaminopropyl, 2-cyanoethyl, 6-hydroxyhexyl,  
2-hydroxyethyl, 2-amidinoethyl, 2-guanidinoethyl, 3-guanidinopropyl,  
4-guanidinobutyl, 3-hydroxypropyl, 4-hydroxybutyl, 6-cyanoethyl,  
5 2-dimethylaminoethyl, 3-methylbutyl, 2-methylbutyl, (S)-2-methylbutyl,  
3-aminopropyl, 2-hexyl, and 4-aminobutyl;

- B is optionally selected from the group consisting of cyclopropyl,  
cyclobutyl, cyclopentyl, cyclohexyl, oxalan-2-yl, 2-(2R)-bicyclo[2.2.1]-heptyl,  
oxetan-3-yl, azetidin-1-yl, azetidin-2-yl, azetidin-3-yl, 1-pyrrolidinyl and 1-  
10 piperidinyl;

A is selected from the group consisting of a bond,  $\text{CH}_2$ ,  $\text{CH}_3\text{CH}$ , and  
 $\text{CH}_2\text{CH}_2$ ;

- $\text{X}^{\text{O}}$  is selected from the group consisting of hydrido, hydroxy, amino,  
amidino, aminomethyl, cyano, methyl, trifluoromethyl, hydroxymethyl, and  
15 fluoro;

W and Z are independently selected from the group consisting of  $\text{CH}$ ,  
N, CF, CCl, C-CN, C-NH<sub>2</sub>, C-CH<sub>2</sub>NH<sub>2</sub>, C-OH, C-CH<sub>2</sub>OH, C-CO<sub>2</sub>H, and C-  
C(O)NH<sub>2</sub>;

- X and Y are independently selected from the group consisting of CH, N,  
20 CF, C-CN, C-NH<sub>2</sub>, C-CH<sub>2</sub>NH<sub>2</sub>, C-CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>, C-C(NH)NH<sub>2</sub>,  
C-C(NOH)NH<sub>2</sub>, C-OH, C-CH<sub>2</sub>OH, C-CH<sub>2</sub>CH<sub>2</sub>OH, C-CO<sub>2</sub>H, C-C(O)NH<sub>2</sub>,  
C-CH<sub>2</sub>CO<sub>2</sub>H, N-benzylamidocarbonyl-C,  
N-(2-chlorobenzyl)amidocarbonyl-C, N-(3-fluorobenzyl)amidocarbonyl-C,  
N-(2-trifluoromethylbenzyl)amidocarbonyl-C,  
25 N-(1-phenylethyl)amidocarbonyl-C,  
N-(1-methyl-1-phenylethyl)amidocarbonyl-C, N-benzylamidosulfonyl-C,  
N-(2-chlorobenzyl)amidosulfonyl-C, N-ethylamidocarbonyl-C,  
N-isopropylamidocarbonyl-C, N-propylamidocarbonyl-C,  
N-isobutylamidocarbonyl-C, N-(2-butyl)amidocarbonyl-C,  
30 N-cyclobutylamidocarbonyl-C, N-cyclopentylamidocarbonyl-C,  
N-cyclohexylamidocarbonyl-C;

$\text{Y}^{\text{O}}$  is selected from the group consisting of:

1-Q<sup>b</sup>-4-Q<sup>s</sup>-2-R<sup>16</sup>-3-R<sup>17</sup>-5-R<sup>18</sup>-6-R<sup>19</sup> benzene,  
 2-Q<sup>b</sup>-5-Q<sup>s</sup>-6-R<sup>17</sup>-4-R<sup>18</sup>-3-R<sup>19</sup> pyridine,  
 3-Q<sup>b</sup>-6-Q<sup>s</sup>-2-R<sup>16</sup>-5-R<sup>18</sup>-4-R<sup>19</sup> pyridine,  
 3-Q<sup>b</sup>-5-Q<sup>s</sup>-4-R<sup>16</sup>-2-R<sup>19</sup> thiophene, and 2-Q<sup>b</sup>-5-Q<sup>s</sup>-3-R<sup>16</sup>-4-R<sup>17</sup> thiophene;

5 R<sup>16</sup> and R<sup>19</sup> are independently selected from the group consisting of hydrido, amidino, amino, aminomethyl, methoxy, methylamino, hydroxy, hydroxymethyl, fluoro, chloro, and cyano;

R<sup>17</sup> and R<sup>18</sup> are independently selected from the group consisting of hydrido, fluoro, chloro, hydroxy, hydroxymethyl, amino, carboxy, and cyano;

10 Q<sup>b</sup> is selected from the group consisting of NR<sup>20</sup>R<sup>21</sup>,

C(NR<sup>25</sup>)NR<sup>23</sup>R<sup>24</sup>, and N(R<sup>26</sup>)C(NR<sup>25</sup>)N(R<sup>23</sup>)(R<sup>24</sup>);

R<sup>20</sup>, R<sup>21</sup>, R<sup>23</sup>, R<sup>24</sup>, R<sup>25</sup>, and R<sup>26</sup> are independently selected from the group consisting of hydrido, methyl, and ethyl;

Q<sup>s</sup> is CH<sub>2</sub>.

15

39. Compound of Claim 38 or a pharmaceutically acceptable salt thereof, wherein;

20 B is selected from the group consisting of 3-aminophenyl, 3-amidinophenyl, 4-amidinophenyl, 3-chlorophenyl, 4-chlorophenyl, 3,4-dichlorophenyl, 2-fluorophenyl, 4-methylphenyl, phenyl, 2-imidazolyl, 3-pyridyl, 4-pyridyl, and 3-trifluoromethyl-2-pyridyl;

25 B is optionally selected from the group consisting of hydrido, ethyl, 2-propenyl, 2-propynyl, propyl, isopropyl, butyl, 2-butyl, (R)-2-butyl, (S)-2-butyl, tert-butyl, isobutyl, 1-pentyl, 3-pentyl, 2-methylbutyl, 2,2,2-trifluoroethyl, 6-amidocarbonylhexyl, 4-methyl-2-pentyl, 3-hydroxypropyl, 1-methoxy-2-propyl, 2-methoxyethyl, 2-methyl-2-butyl, 3-methyl-2-butyl, 2-dimethylaminopropyl, 2-cyanoethyl, 6-hydroxyhexyl, 2-hydroxyethyl, 2-amidinoethyl, 2-guanidinoethyl, 3-guanidinopropyl, 4-guanidinobutyl, 3-hydroxypropyl, 4-hydroxybutyl, 6-cyanoethyl,

2-dimethylaminoethyl, 3-methylbutyl, 2-methylbutyl, (S)-2-methylbutyl, 3-aminopropyl, 2-hexyl, and 4-aminobutyl;

B is optionally selected from the group consisting of cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, oxalan-2-yl, 2-(2R)-bicyclo[2.2.1]-heptyl, oxetan-3-yl, azetidin-1-yl, azetidin-2-yl, azetidin-3-yl, and 1-piperidinyl;

A is selected from the group consisting of a bond,  $\text{CH}_2$ ,  $\text{CH}_3\text{CH}$ , and  $\text{CH}_2\text{CH}_2$ ;

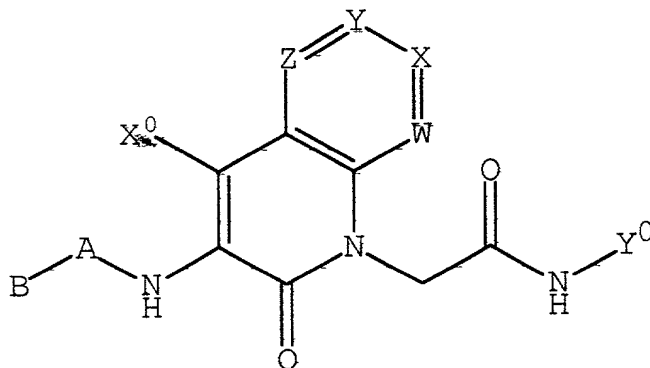
$\text{X}^{\text{O}}$  is selected from the group consisting of hydrido, hydroxy, amino, amidino, aminomethyl, cyano, methyl, trifluoromethyl, hydroxymethyl, and fluoro;

W and Z are independently selected from the group consisting of CH, N, CF, CCl, C-CN, C-NH<sub>2</sub>, C-CH<sub>2</sub>NH<sub>2</sub>, C-OH, C-CH<sub>2</sub>OH, C-CO<sub>2</sub>H, and C-C(O)NH<sub>2</sub>;

X and Y are independently selected from the group consisting of CH, N, CF, C-CN, C-NH<sub>2</sub>, C-CH<sub>2</sub>NH<sub>2</sub>, C-CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>, C-C(NH)NH<sub>2</sub>, C-C(NOH)NH<sub>2</sub>, C-OH, C-CH<sub>2</sub>OH, C-CH<sub>2</sub>CH<sub>2</sub>OH, C-CO<sub>2</sub>H, C-C(O)NH<sub>2</sub>, C-CH<sub>2</sub>CO<sub>2</sub>H, N-benzylamidocarbonyl-C, N-(2-chlorobenzyl)amidocarbonyl-C, N-(3-fluorobenzyl)amidocarbonyl-C, N-(2-trifluoromethylbenzyl)amidocarbonyl-C, N-(1-phenylethyl)amidocarbonyl-C, N-(1-methyl-1-phenylethyl)amidocarbonyl-C, N-benzylamidosulfonyl-C, N-(2-chlorobenzyl)amidosulfonyl-C, N-ethylamidocarbonyl-C, N-isopropylamidocarbonyl-C, N-propylamidocarbonyl-C, N-isobutylamidocarbonyl-C, N-(2-butyl)amidocarbonyl-C, N-cyclobutylamidocarbonyl-C, N-cyclopentylamidocarbonyl-C, N-cyclohexylamidocarbonyl-C;

$\text{Y}^{\text{O}}$  is selected from the group consisting of 5-amidino-2-thienylmethyl, 4-amidinobenzyl, 2-fluoro-4-amidinobenzyl, and 3-fluoro-4-amidinobenzyl.

40. A compound as recited in Claim 33 where said compound is selected from the group of the Formula:



5 or a pharmaceutically acceptable salt thereof, wherein;

B is 3-chlorophenyl, A is  $\text{CH}_2\text{CH}_2$ ,  $\text{Y}^{\text{O}}$  is 4-amidinobenzyl, W is CH, X is C-NH<sub>2</sub>, Y is C-CH<sub>2</sub>CO<sub>2</sub>H, Z is CH, and  $\text{X}^{\text{O}}$  is hydrido;

B is phenyl, A is  $\text{CH}_2$ ,  $\text{Y}^{\text{O}}$  is 4-amidinobenzyl, W is N, X is C-CH<sub>2</sub>NH<sub>2</sub>, Y is C-CO<sub>2</sub>H, Z is CH, and  $\text{X}^{\text{O}}$  is hydrido;

10 B is 3-chlorophenyl, A is  $\text{CH}_2\text{CH}_2$ ,  $\text{Y}^{\text{O}}$  is 4-amidinobenzyl, W is C-OH, X is C-CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>, Y is C-OH, Z is CH, and  $\text{X}^{\text{O}}$  is hydrido;

B is 2-imidazolyl, A is  $\text{CH}_2\text{CH}_2\text{CH}_2$ ,  $\text{Y}^{\text{O}}$  is 4-amidinobenzyl, W is C-NH<sub>2</sub>, X is C-CH<sub>2</sub>OH, Y is C-NH<sub>2</sub>, Z is CH, and  $\text{X}^{\text{O}}$  is hydrido;

15 B is 2,2,2-trifluoroethyl, A is single bond,  $\text{Y}^{\text{O}}$  is 4-amidinobenzyl, W is CH, X is C-NH<sub>2</sub>, Y is C-CH<sub>2</sub>CO<sub>2</sub>H, Z is CH, and  $\text{X}^{\text{O}}$  is hydrido;

B is (S)-2-butyl, A is single bond,  $\text{Y}^{\text{O}}$  is 4-amidinobenzyl, W is N, X is C-CH<sub>2</sub>NH<sub>2</sub>, Y is C-CO<sub>2</sub>H, Z is CH, and  $\text{X}^{\text{O}}$  is hydrido;

B is isopropyl, A is single bond,  $\text{Y}^{\text{O}}$  is 4-amidinobenzyl, W is C-OH, X is C-CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>, Y is C-OH, Z is CH, and  $\text{X}^{\text{O}}$  is hydrido;

20 B is isopropyl, A is single bond,  $\text{Y}^{\text{O}}$  is 4-amidinobenzyl, W is C-NH<sub>2</sub>, X is C-CH<sub>2</sub>OH, Y is C-NH<sub>2</sub>, Z is CH, and  $\text{X}^{\text{O}}$  is hydrido;

B is hydrido, A is  $\text{CH}_2(\text{CH}_3)\text{N}$ ,  $\text{Y}^0$  is 4-amidinobenzyl, W is CH, X is C- $\text{NH}_2$ , Y is C- $\text{CH}_2\text{CO}_2\text{H}$ , Z is CH, and  $\text{X}^0$  is hydrido;

B is ethyl, A is single bond,  $\text{Y}^0$  is 4-amidinobenzyl, W is N, X is C- $\text{CH}_2\text{NH}_2$ , Y is C- $\text{CO}_2\text{H}$ , Z is CH, and  $\text{X}^0$  is hydrido;

- 5 B is ethyl, A is single bond,  $\text{Y}^0$  is 4-amidino-2-fluorobenzyl, W is C-OH, X is C- $\text{CH}_2\text{CH}_2\text{NH}_2$ , Y is C-OH, Z is CH, and  $\text{X}^0$  is hydrido;

B is 2-propenyl, A is single bond,  $\text{Y}^0$  is 4-amidinobenzyl, W is C- $\text{NH}_2$ , X is C- $\text{CH}_2\text{OH}$ , Y is C- $\text{NH}_2$ , Z is CH, and  $\text{X}^0$  is hydrido;

- 10 B is isopropyl, A is single bond,  $\text{Y}^0$  is 4-amidino-2-fluorobenzyl, W is CH, X is C- $\text{NH}_2$ , Y is C- $\text{CH}_2\text{CO}_2\text{H}$ , Z is CH, and  $\text{X}^0$  is hydrido;

B is isopropyl, A is single bond,  $\text{Y}^0$  is 4-amidinobenzyl, W is N, X is C- $\text{CH}_2\text{NH}_2$ , Y is C- $\text{CO}_2\text{H}$ , Z is CH, and  $\text{X}^0$  is hydrido;

B is 2-butyl, A is single bond,  $\text{Y}^0$  is 4-amidinobenzyl, W is C-OH, X is C- $\text{CH}_2\text{CH}_2\text{NH}_2$ , Y is C-OH, Z is CH, and  $\text{X}^0$  is hydrido;

- 15 B is (R)-2-butyl, A is single bond,  $\text{Y}^0$  is 4-amidinobenzyl, W is C- $\text{NH}_2$ , X is C- $\text{CH}_2\text{OH}$ , Y is C- $\text{NH}_2$ , Z is CH, and  $\text{X}^0$  is hydrido;

B is 2-propynyl, A is single bond,  $\text{Y}^0$  is 4-amidinobenzyl, W is CH, X is C- $\text{NH}_2$ , Y is C- $\text{CH}_2\text{CO}_2\text{H}$ , Z is CH, and  $\text{X}^0$  is hydrido;

- 20 B is hydrido, A is  $\text{CH}_2$ ,  $\text{Y}^0$  is 4-amidinobenzyl, W is N, X is C- $\text{CH}_2\text{NH}_2$ , Y is C- $\text{CO}_2\text{H}$ , Z is CH, and  $\text{X}^0$  is hydrido;

B is cyclopropyl, A is single bond,  $\text{Y}^0$  is 4-amidinobenzyl, W is C-OH, X is C- $\text{CH}_2\text{CH}_2\text{NH}_2$ , Y is C-OH, Z is CH, and  $\text{X}^0$  is hydrido;

B is cyclobutyl, A is single bond,  $\text{Y}^0$  is 4-amidino-2-fluorobenzyl, W is C- $\text{NH}_2$ , X is C- $\text{CH}_2\text{OH}$ , Y is C- $\text{NH}_2$ , Z is CH, and  $\text{X}^0$  is hydrido;



B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl, W is CH, X is C-NH<sub>2</sub>, Y is C-CH<sub>2</sub>CO<sub>2</sub>H, Z is CH, and  $X^O$  is hydrido;

B is cyclopropyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl, W is N, X is C-CH<sub>2</sub>NH<sub>2</sub>, Y is C-CO<sub>2</sub>H, Z is CH, and  $X^O$  is hydrido;

5 B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl, W is C-OH, X is C-CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>, Y is C-OH, Z is CH, and  $X^O$  is hydrido;

B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidino-3-fluorobenzyl, W is C-NH<sub>2</sub>, X is C-CH<sub>2</sub>OH, Y is C-NH<sub>2</sub>, Z is CH, and  $X^O$  is hydrido;

10 B is cyclopentyl, A is single bond,  $Y^0$  is 4-amidinobenzyl, W is CH, X is C-NH<sub>2</sub>, Y is C-CH<sub>2</sub>CO<sub>2</sub>H, Z is CH, and  $X^O$  is hydrido;

B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl, W is N, X is C-CH<sub>2</sub>NH<sub>2</sub>, Y is C-CO<sub>2</sub>H, Z is CH, and  $X^O$  is hydrido;

B is cyclopropyl, A is CH<sub>2</sub>,  $Y^0$  is 4-amidinobenzyl, W is C-OH, X is C-CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>, Y is C-OH, Z is CH, and  $X^O$  is hydrido;

15 B is 2-(2R)-bicyclo[2.2.1]-heptyl, A is single bond,  $Y^0$  is 4-amidinobenzyl, W is C-NH<sub>2</sub>, X is C-CH<sub>2</sub>OH, Y is C-NH<sub>2</sub>, Z is CH, and  $X^O$  is hydrido;

B is cyclopentyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl, W is CH, X is C-NH<sub>2</sub>, Y is C-CH<sub>2</sub>CO<sub>2</sub>H, Z is CH, and  $X^O$  is hydrido;

20 B is cyclohexyl, A is CH<sub>2</sub>CH<sub>2</sub>,  $Y^0$  is 4-amidinobenzyl, W is N, X is C-CH<sub>2</sub>NH<sub>2</sub>, Y is C-CO<sub>2</sub>H, Z is CH, and  $X^O$  is hydrido;

B is 3-chlorophenyl, A is CH<sub>2</sub>CH<sub>2</sub>,  $Y^0$  is 4-amidinobenzyl, W is C-OH, X is C-CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>, Y is C-OH, Z is CH, and  $X^O$  is hydrido;

B is phenyl, A is CH<sub>2</sub>,  $Y^0$  is 4-amidinobenzyl, W is C-NH<sub>2</sub>, X is C-CH<sub>2</sub>OH, Y is C-NH<sub>2</sub>, Z is CH, and  $X^O$  is hydrido;

B is 3-chlorophenyl, A is  $\text{CH}_2\text{CH}_2$ ,  $\text{Y}^0$  is 4-amidinobenzyl, W is CH, X is C-NH<sub>2</sub>, Y is C-CH<sub>2</sub>CO<sub>2</sub>H, Z is CH, and  $\text{X}^\circ$  is hydrido;

B is 2-imidazolyl, A is  $\text{CH}_2\text{CH}_2\text{CH}_2$ ,  $\text{Y}^0$  is 4-amidinobenzyl, W is N, X is C-CH<sub>2</sub>NH<sub>2</sub>, Y is C-CO<sub>2</sub>H, Z is CH, and  $\text{X}^\circ$  is hydrido;

5 B is 2,2,2-trifluoroethyl, A is single bond,  $\text{Y}^0$  is 4-amidinobenzyl, W is C-OH, X is C-CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>, Y is C-OH, Z is CH, and  $\text{X}^\circ$  is hydrido;

B is (S)-2-butyl, A is single bond,  $\text{Y}^0$  is 4-amidinobenzyl, W is C-NH<sub>2</sub>, X is C-CH<sub>2</sub>OH, Y is C-NH<sub>2</sub>, Z is CH, and  $\text{X}^\circ$  is hydrido;

10 B is isopropyl, A is single bond,  $\text{Y}^0$  is 4-amidinobenzyl, W is CH, X is C-NH<sub>2</sub>, Y is C-CH<sub>2</sub>CO<sub>2</sub>H, Z is CH, and  $\text{X}^\circ$  is hydrido;

B is isopropyl, A is single bond,  $\text{Y}^0$  is 4-amidinobenzyl, W is N, X is C-CH<sub>2</sub>NH<sub>2</sub>, Y is C-CO<sub>2</sub>H, Z is CH, and  $\text{X}^\circ$  is hydrido;

B is hydrido, A is  $\text{CH}_2(\text{CH}_3)\text{N}$ ,  $\text{Y}^0$  is 4-amidinobenzyl, W is C-OH, X is C-CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>, Y is C-OH, Z is CH, and  $\text{X}^\circ$  is hydrido;

15 B is ethyl, A is single bond,  $\text{Y}^0$  is 4-amidinobenzyl, W is C-NH<sub>2</sub>, X is C-CH<sub>2</sub>OH, Y is C-NH<sub>2</sub>, Z is CH, and  $\text{X}^\circ$  is hydrido;

B is ethyl, A is single bond,  $\text{Y}^0$  is 4-amidino-2-fluorobenzyl, W is CH, X is C-NH<sub>2</sub>, Y is C-CH<sub>2</sub>CO<sub>2</sub>H, Z is CH, and  $\text{X}^\circ$  is hydrido;

20 B is 2-propenyl, A is single bond,  $\text{Y}^0$  is 4-amidinobenzyl, W is N, X is C-CH<sub>2</sub>NH<sub>2</sub>, Y is C-CO<sub>2</sub>H, Z is CH, and  $\text{X}^\circ$  is hydrido;

B is isopropyl, A is single bond,  $\text{Y}^0$  is 4-amidino-2-fluorobenzyl, W is C-OH, X is C-CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>, Y is C-OH, Z is CH, and  $\text{X}^\circ$  is hydrido;

B is isopropyl, A is single bond,  $\text{Y}^0$  is 4-amidinobenzyl, W is C-NH<sub>2</sub>, X is C-CH<sub>2</sub>OH, Y is C-NH<sub>2</sub>, Z is CH, and  $\text{X}^\circ$  is hydrido;

B is 2-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl, W is CH, X is C-NH<sub>2</sub>, Y is C-CH<sub>2</sub>CO<sub>2</sub>H, Z is CH, and  $X^0$  is hydrido;

B is (R)-2-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl, W is N, X is C-CH<sub>2</sub>NH<sub>2</sub>, Y is C-CO<sub>2</sub>H, Z is CH, and  $X^0$  is hydrido;

5 B is 2-propynyl, A is single bond,  $Y^0$  is 4-amidinobenzyl, W is C-OH, X is C-CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>, Y is C-OH, Z is CH, and  $X^0$  is hydrido;

B is hydrido, A is CH<sub>2</sub>,  $Y^0$  is 4-amidinobenzyl, W is C-NH<sub>2</sub>, X is C-CH<sub>2</sub>OH, Y is C-NH<sub>2</sub>, Z is CH, and  $X^0$  is hydrido;

10 B is cyclopropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl, W is CH, X is C-NH<sub>2</sub>, Y is C-CH<sub>2</sub>CO<sub>2</sub>H, Z is CH, and  $X^0$  is hydrido;

B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl, W is N, X is C-CH<sub>2</sub>NH<sub>2</sub>, Y is C-CO<sub>2</sub>H, Z is CH, and  $X^0$  is hydrido;

B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl, W is C-OH, X is C-CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>, Y is C-OH, Z is CH, and  $X^0$  is hydrido;

15 B is cyclopropyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl, W is C-NH<sub>2</sub>, X is C-CH<sub>2</sub>OH, Y is C-NH<sub>2</sub>, Z is CH, and  $X^0$  is hydrido;

B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl, W is CH, X is C-NH<sub>2</sub>, Y is C-CH<sub>2</sub>CO<sub>2</sub>H, Z is CH, and  $X^0$  is hydrido;

20 B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidino-3-fluorobenzyl, W is N, X is C-CH<sub>2</sub>NH<sub>2</sub>, Y is C-CO<sub>2</sub>H, Z is CH, and  $X^0$  is hydrido;

B is cyclopentyl, A is single bond,  $Y^0$  is 4-amidinobenzyl, W is C-OH, X is C-CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>, Y is C-OH, Z is CH, and  $X^0$  is hydrido;

B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl, W is C-NH<sub>2</sub>, X is C-CH<sub>2</sub>OH, Y is C-NH<sub>2</sub>, Z is CH, and  $X^0$  is hydrido;

B is 2-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl, W is CH, X is C-NH<sub>2</sub>, Y is C-CH<sub>2</sub>CO<sub>2</sub>H, Z is CH, and  $X^O$  is hydrido;

B is (R)-2-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl, W is N, X is C-CH<sub>2</sub>NH<sub>2</sub>, Y is C-CO<sub>2</sub>H, Z is CH, and  $X^O$  is hydrido;

- 5 B is 2-propynyl, A is single bond,  $Y^0$  is 4-amidinobenzyl, W is C-OH, X is C-CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>, Y is C-OH, Z is CH, and  $X^O$  is hydrido;

B is hydrido, A is CH<sub>2</sub>,  $Y^0$  is 4-amidinobenzyl, W is C-NH<sub>2</sub>, X is C-CH<sub>2</sub>OH, Y is C-NH<sub>2</sub>, Z is CH, and  $X^O$  is hydrido;

- 10 B is cyclopropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl, W is CH, X is C-NH<sub>2</sub>, Y is C-CH<sub>2</sub>CO<sub>2</sub>H, Z is CH, and  $X^O$  is hydrido;

B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl, W is N, X is C-CH<sub>2</sub>NH<sub>2</sub>, Y is C-CO<sub>2</sub>H, Z is CH, and  $X^O$  is hydrido;

B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl, W is C-OH, X is C-CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>, Y is C-OH, Z is CH, and  $X^O$  is hydrido;

- 15 B is cyclopropyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl, W is C-NH<sub>2</sub>, X is C-CH<sub>2</sub>OH, Y is C-NH<sub>2</sub>, Z is CH, and  $X^O$  is hydrido;

B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl, W is CH, X is C-NH<sub>2</sub>, Y is C-CH<sub>2</sub>CO<sub>2</sub>H, Z is CH, and  $X^O$  is hydrido;

- 20 B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidino-3-fluorobenzyl, W is N, X is C-CH<sub>2</sub>NH<sub>2</sub>, Y is C-CO<sub>2</sub>H, Z is CH, and  $X^O$  is hydrido;

B is cyclopentyl, A is single bond,  $Y^0$  is 4-amidinobenzyl, W is C-OH, X is C-CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>, Y is C-OH, Z is CH, and  $X^O$  is hydrido;

B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl, W is C-NH<sub>2</sub>, X is C-CH<sub>2</sub>OH, Y is C-NH<sub>2</sub>, Z is CH, and  $X^O$  is hydrido;

B is cyclopropyl, A is  $\text{CH}_2$ ,  $\text{Y}^0$  is 4-amidinobenzyl, W is CH, X is  $\text{C-NH}_2$ , Y is  $\text{C-CH}_2\text{CO}_2\text{H}$ , Z is CH, and  $\text{X}^\circ$  is hydrido;

B is 2-(2R)-bicyclo[2.2.1]-heptyl, A is single bond,  $\text{Y}^0$  is 4-amidinobenzyl, W is N, X is  $\text{C-CH}_2\text{NH}_2$ , Y is  $\text{C-CO}_2\text{H}$ , Z is CH, and  $\text{X}^\circ$  is hydrido;

- 5 B is cyclopentyl, A is single bond,  $\text{Y}^0$  is 4-amidino-2-fluorobenzyl, W is C-OH, X is  $\text{C-CH}_2\text{CH}_2\text{NH}_2$ , Y is C-OH, Z is CH, and  $\text{X}^\circ$  is hydrido;

B is cyclohexyl, A is  $\text{CH}_2\text{CH}_2$ ,  $\text{Y}^0$  is 4-amidinobenzyl, W is  $\text{C-NH}_2$ , X is  $\text{C-CH}_2\text{OH}$ , Y is C-  $\text{NH}_2$ , Z is CH, and  $\text{X}^\circ$  is hydrido;

- 10 B is cyclobutyl, A is single bond,  $\text{Y}^0$  is 4-amidino-2-fluorobenzyl, W is C-H, X is  $\text{C-NH}_2$ , Y is C-  $\text{NH}_2$ , Z is CH, and  $\text{X}^\circ$  is hydrido;

B is cyclobutyl, A is single bond,  $\text{Y}^0$  is 4-amidino-2-fluorobenzyl, W is C-H, X is  $\text{C-NH}_2$ , Y is  $\text{C-CH}_2\text{NH}_2$ , Z is CH, and  $\text{X}^\circ$  is hydrido;

B is cyclobutyl, A is single bond,  $\text{Y}^0$  is 4-amidino-2-fluorobenzyl, W is C-H, X is  $\text{C-CO}_2\text{H}$ , Y is  $\text{C-CH}_2\text{NH}_2$ , Z is CH, and  $\text{X}^\circ$  is hydrido;

- 15 B is cyclobutyl, A is single bond,  $\text{Y}^0$  is 4-amidinobenzyl, W is CH, X is  $\text{C-CH}_2\text{CO}_2\text{H}$ , Y is  $\text{C-CH}_2\text{NH}_2$ , Z is CH, and  $\text{X}^\circ$  is hydrido;

B is cyclobutyl, A is single bond,  $\text{Y}^0$  is 4-amidinobenzyl, W is CH, X is  $\text{C-CH}_2\text{CO}_2\text{H}$ , X is  $\text{C-NH}_2$ , Z is CH, and  $\text{X}^\circ$  is hydrido;

- 20 B is isopropyl, A is single bond,  $\text{Y}^0$  is 4-amidino-2-fluorobenzyl, W is C-H, X is  $\text{C-NH}_2$ , Y is C-  $\text{NH}_2$ , Z is CH, and  $\text{X}^\circ$  is hydrido;

B is isopropyl, A is single bond,  $\text{Y}^0$  is 4-amidino-2-fluorobenzyl, W is C-H, X is  $\text{C-NH}_2$ , Y is  $\text{C-CH}_2\text{NH}_2$ , Z is CH, and  $\text{X}^\circ$  is hydrido;

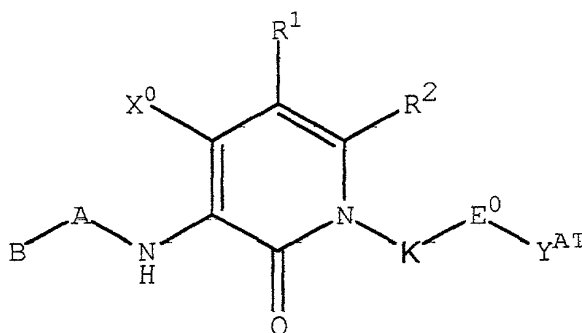
B is isopropyl, A is single bond,  $\text{Y}^0$  is 4-amidino-2-fluorobenzyl, W is C-H, X is  $\text{C-CO}_2\text{H}$ , Y is  $\text{C-CH}_2\text{NH}_2$ , Z is CH, and  $\text{X}^\circ$  is hydrido;

B is isopropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl, W is CH, X is C-CH<sub>2</sub>CO<sub>2</sub>H, Y is C-CH<sub>2</sub>NH<sub>2</sub>, Z is CH, and  $X^0$  is hydrido;

B is isopropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl, W is CH, X is C-CH<sub>2</sub>CO<sub>2</sub>H, X is C-NH<sub>2</sub>, Z is CH, and  $X^0$  is hydrido.

5

41. Compound of Claim 2 of the Formula:



or a pharmaceutically acceptable salt thereof, wherein;

- 10 B is phenyl or a heteroaryl of 5 or 6 ring members, wherein a carbon adjacent to the carbon at the point of attachment of said phenyl or heteroaryl ring to A is optionally substituted by  $R^{32}$ , the other carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^{36}$ , a carbon adjacent to  $R^{32}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{33}$ , a carbon adjacent to  $R^{36}$  and two atoms from the
- 15 carbon at the point of attachment is optionally substituted by  $R^{35}$ , and any carbon adjacent to both  $R^{33}$  and  $R^{35}$  is optionally substituted by  $R^{34}$ ;

- $R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$  are independently selected from the group consisting of hydrido, acetamido, haloacetamido, amidino, guanidino, alkylenedioxy, haloalkylthio, alkanoyloxy, alkoxy, hydroxy, amino,
- 20 alkoxyamino, haloalkanoyl, nitro, alkylamino, alkylthio, aryl, aralkyl, cycloalkyl, cycloalkylalkyl, heteroaryl, heterocyclyl, alkylsulfonamido, amidosulfonyl,

alkyl, alkenyl, halo, haloalkyl, haloalkenyl, haloalkoxy, hydroxyalkyl, alkylamino, carboalkoxy, carboxy, carboxamido, cyano, and Q<sup>b</sup>;

B is optionally selected from the group consisting of hydrido, trialkylsilyl, C2-C8 alkyl, C3-C8 alkylenyl, C3-C8 alkenyl, C3-C8 alkynyl, and  
 5 C2-C8 haloalkyl, wherein each member of group B is optionally substituted at any carbon up to and including 6 atoms from the point of attachment of B to A with one or more of the group consisting of R<sup>32</sup>, R<sup>33</sup>, R<sup>34</sup>, R<sup>35</sup>, and R<sup>36</sup>;

B is optionally a C3-C12 cycloalkyl or a C4-C9 saturated heterocyclyl, wherein each ring carbon is optionally substituted with R<sup>33</sup>, a ring carbon other  
 10 than the ring carbon at the point of attachment of B to A is optionally substituted with oxo provided that no more than one ring carbon is substituted by oxo at the same time, ring carbons and a nitrogen adjacent to the carbon atom at the point of attachment are optionally substituted with R<sup>9</sup> or R<sup>13</sup>, a ring  
 carbon or nitrogen adjacent to the R<sup>9</sup> position and two atoms from the point of  
 15 attachment is optionally substituted with R<sup>10</sup>, a ring carbon or nitrogen adjacent to the R<sup>13</sup> position and two atoms from the point of attachment is optionally substituted with R<sup>12</sup>, a ring carbon or nitrogen three atoms from the point of attachment and adjacent to the R<sup>10</sup> position is optionally substituted with R<sup>11</sup>,  
 a ring carbon or nitrogen three atoms from the point of attachment and adjacent  
 20 to the R<sup>12</sup> position is optionally substituted with R<sup>33</sup>, and a ring carbon or nitrogen four atoms from the point of attachment and adjacent to the R<sup>11</sup> and R<sup>33</sup> positions is optionally substituted with R<sup>34</sup>;

R<sup>9</sup>, R<sup>10</sup>, R<sup>11</sup>, R<sup>12</sup>, and R<sup>13</sup> are independently selected from the group consisting of hydrido, acetamido, haloacetamido, alkoxyamino, alkanoyl,  
 25 haloalkanoyl, amidino, guanidino, alkylenedioxy, haloalkylthio, alkoxy, cycloalkoxy, cycloalkylalkoxy, aralkoxy, aryloxy, heteroaryloxy, heteroaralkoxy, heterocyclyloxy, heterocyclylalkoxy, hydroxy, amino,

alkylamino, N-alkyl-N-arylamino, arylamino, aralkylamino, heteroarylamino, heteroaralkylamino, heterocyclylamino, heterocyclylalkylamino, alkylthio, alkylsulfinyl, arylsulfinyl, aralkylsulfinyl, cycloalkylsulfinyl, heteroarylsulfinyl, alkylsulfamido, alkylsulfonyl, arylsulfonyl, aralkylsulfonyl, cycloalkylsulfonyl, heteroarylsulfonyl, amidosulfonyl, alkyl, aryl, aralkyl, cycloalkyl, cycloalkylalkyl, heteroaryl, heterocyclyl, halo, haloalkyl, haloalkoxy, hydroxyalkyl, hydroxyhaloalkyl, aminoalkyl, carboalkoxy, carboxy, carboxyalkyl, carboxamido, and cyano;

- 5 A is a bond or  $(\text{CH}(\text{R}^{15}))_{\text{pa}}-(\text{W}^7)_{\text{rr}}$  wherein rr is 0 or 1, pa is an integer selected from 0 through 3, and  $\text{W}^7$  is selected from the group consisting of O, S, C(O),  $(\text{R}^7)\text{NC}(\text{O})$ ,  $(\text{R}^7)\text{NC}(\text{S})$ , and  $\text{N}(\text{R}^7)$ ;

$\text{R}^7$  is selected from the group consisting of hydrido, hydroxy and alkyl;

$\text{R}^{15}$  is selected from the group consisting of hydrido, hydroxy, halo, alkyl, and haloalkyl;

- 15  $\text{R}^1$  and  $\text{X}^{\text{O}}$  are independently selected from the group consisting of hydrido, alkyl, cyano, halo, haloalkyl, haloalkoxy, amino, aminoalkyl, alkylamino, amidino, hydroxy, hydroxyamino, alkoxy, hydroxyalkyl, alkoxyamino, thiol, and alkylthio;

$\text{R}^2$  is  $\text{Z}^0\text{-Q}$ ;

- 20  $\text{Z}^0$  is selected from the group consisting of a bond,  $\text{W}^0-(\text{CH}(\text{R}^{42}))_{\text{p}}$  wherein p is an integer selected from 0 through 3 and  $\text{W}^0$  is selected from the group consisting of O, S, and  $\text{N}(\text{R}^{41})$ , and  $(\text{CH}(\text{R}^{41}))_{\text{g}}\text{-O}$  wherein g is an integer selected from 1 through 3, with the proviso that  $\text{Z}^0$  is directly bonded to the pyridone ring;

- 25  $\text{Z}^0$  is optionally  $\text{W}^{22}-(\text{CH}(\text{R}^{42}))_{\text{h}}$  wherein h is 0 or 1 and  $\text{W}^{22}$  is selected from the group consisting of 1,2-cyclopropyl, 1,2-cyclobutyl, 1,2-cyclohexyl, 1,3-cyclohexyl, 1,2-cyclopentyl, 1,3-cyclopentyl, 2,3-morpholinyl, 2,4-morpholinyl, 2,6-morpholinyl, 3,4-morpholinyl, 3,5-morpholinyl, 1,2-piperazinyl, 1,3-piperazinyl, 2,3-piperazinyl,



- 2,6-piperazinyl, 1,2-piperidinyl, 1,3-piperidinyl, 2,3-piperidinyl, 2,4-piperidinyl, 2,6-piperidinyl, 3,4-piperidinyl, 1,2-pyrrolidinyl, 1,3-pyrrolidinyl, 2,3-pyrrolidinyl, 2,4-pyrrolidinyl, 2,5-pyrrolidinyl, 3,4-pyrrolidinyl, 2,3-tetrahydrofuranyl, 2,4-tetrahydrofuranyl, 2,5-tetrahydrofuranyl, and
- 5 3,4-tetrahydrofuranyl, wherein  $Z^0$  is directly bonded to the pyridone ring and  $W^{22}$  is optionally substituted with one or more substituents selected from the group consisting of  $R^9$ ,  $R^{10}$ ,  $R^{11}$ ,  $R^{12}$ , and  $R^{13}$ ;
- $R^{41}$  and  $R^{42}$  are independently selected from the group consisting of hydrido, hydroxy, and amino;
- 10 Q is phenyl or a heteroaryl of 5 or 6 ring members, wherein a carbon adjacent to the carbon at the point of attachment of said phenyl or heteroaryl ring to  $Z^0$  is optionally substituted by  $R^9$ , the other carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^{13}$ , a carbon adjacent to  $R^9$  and two atoms from the carbon at the point of attachment is
- 15 optionally substituted by  $R^{10}$ , a carbon adjacent to  $R^{13}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{12}$ , and any carbon adjacent to both  $R^{10}$  and  $R^{12}$  is optionally substituted by  $R^{11}$ , with the proviso that Q is other than a phenyl when  $Z^0$  is a bond;
- Q is optionally hydrido with the proviso that  $Z^0$  is selected from other
- 20 than a bond;
- K is  $CHR^{4a}$  wherein  $R^{4a}$  is selected from the group consisting of hydrido, hydroxyalkyl, alkyl, alkoxyalkyl, alkylthioalkyl, and haloalkyl;
- $E^0$  is selected from the group consisting of a bond,  $C(O)N(H)$ ,  $(H)NC(O)$ ,  $(R^7)NS(O)_2$ , and  $S(O)_2N(R^7)$ ;
- 25  $Y^{AT}$  is  $Q^b-Q^s$ ;

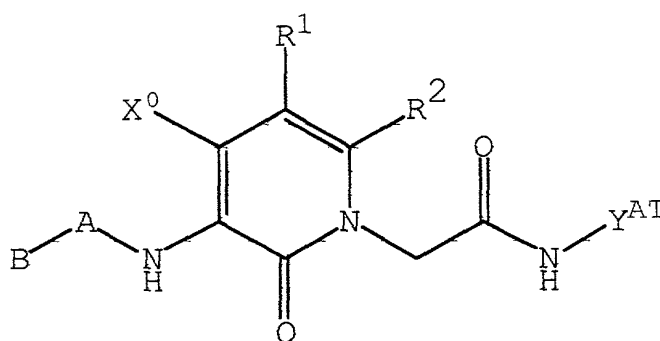
- $Q^s$  is  $(CR^{37}R^{38})_b$  wherein  $b$  is an integer selected from 1 through 4,  
 $R^{37}$  is selected from the group consisting of hydrido, alkyl, and haloalkyl, and  
 $R^{38}$  is selected from the group consisting of hydrido, alkyl, haloalkyl, aroyl,  
 and heteroaroyl with the proviso that there is at least one aroyl or heteroaroyl  
 5 substituent, with the further proviso that no more than one aroyl or heteroaroyl  
 is bonded to  $(CR^{37}R^{38})_b$  at the same time, with the still further proviso that  
 said aroyl and said heteroaroyl are optionally substituted with one or more  
 substituents selected from the group consisting of  $R^{16}$ ,  $R^{17}$ ,  $R^{18}$ , and  $R^{19}$ ,  
 with another further proviso that said aroyl and said heteroaroyl are bonded to  
 10 the  $CR^{37}R^{38}$  that is directly bonded to  $E^0$ , with still another further proviso  
 that no more than one alkyl or one haloalkyl is bonded to a  $CR^{37}R^{38}$  at the  
 same time, and with the additional proviso that said alkyl and haloalkyl are  
 bonded to a carbon other than the one bonding said aroyl or said heteroaroyl;  
 $R^{16}$ ,  $R^{17}$ ,  $R^{18}$ , and  $R^{19}$  are independently selected from the group  
 15 consisting of hydrido, amidino, guanidino, carboxy, haloalkylthio, alkoxy,  
 hydroxy, amino, alkoxyamino, alkylamino, alkylthio, alkylsulfinyl,  
 alkylsulfonyl, alkanoyl, haloalkanoyl, alkyl, halo, haloalkyl, haloalkoxy,  
 hydroxyalkyl, aminoalkyl, and cyano;  
 $R^{16}$  or  $R^{19}$  is optionally selected from the group consisting of  
 20  $NR^{20}R^{21}$ ,  $N(R^{26})C(NR^{25})N(R^{23})(R^{24})$ , and  $C(NR^{25})NR^{23}R^{24}$ , with the  
 proviso that  $R^{16}$ ,  $R^{19}$ , and  $Q^b$  are not simultaneously hydrido;  
 $Q^b$  is selected from the group consisting of  $NR^{20}R^{21}$ , hydrido,  
 $N(R^{26})C(NR^{25})N(R^{23})(R^{24})$ , and  $C(NR^{25})NR^{23}R^{24}$ , with the proviso that  
 no more than one of  $R^{20}$  and  $R^{21}$  is selected from the group consisting of  
 25 hydroxy, amino, alkylamino, and dialkylamino at the same time and with the

further proviso that no more than one of  $R^{23}$  and  $R^{24}$  is selected from the group consisting of hydroxy, amino, alkylamino, and dialkylamino at the same time;

$R^{20}$ ,  $R^{21}$ ,  $R^{23}$ ,  $R^{24}$ ,  $R^{25}$ , and  $R^{26}$  are independently selected from the

- 5 group consisting of hydrido, alkyl, hydroxy, amino, alkylamino and dialkylamino.

42. Compound of Claim 41 of the Formula:



- 10 or a pharmaceutically acceptable salt thereof, wherein;

B is selected from the group consisting of phenyl, 2-thienyl, 3-thienyl, 2-furyl, 3-furyl, 2-pyrrolyl, 3-pyrrolyl, 2-imidazolyl, 4-imidazolyl, 3-pyrazolyl, 4-pyrazolyl, 2-thiazolyl, 3-isoxazolyl, and 5-isoxazolyl, wherein a carbon adjacent to the carbon at the point of attachment of said phenyl or

- 15 heteroaryl ring to A is optionally substituted by  $R^{32}$ , the other carbon adjacent to the carbon at the point of attachment is optionally substituted by  $R^{36}$ , a carbon adjacent to  $R^{32}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{33}$ , a carbon adjacent to  $R^{36}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{35}$ , and any carbon adjacent to both  $R^{33}$  and  $R^{35}$  is optionally substituted by  $R^{34}$ ;
- 20

$R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$  are independently selected from the

group consisting of hydrido, amidino, guanidino, methyl, ethyl, methoxy,

ethoxy, hydroxy, amino, N-methylamino, dimethylamino, methoxyamino, methylthio, ethylthio, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, fluoro, chloro, bromo, amidosulfonyl, N-methylamidosulfonyl, hydroxymethyl, amidocarbonyl, carboxy, cyano, and Q<sup>b</sup>;

- 5 B is optionally selected from the group consisting of hydrido, ethyl, 2-propenyl, 2-propynyl, propyl, isopropyl, butyl, 2-butenyl, 2-butylnyl, sec-butyl, tert-butyl, isobutyl, 2-methylpropenyl, 1-pentyl, 2-pentenyl, 3-pentenyl, 2-pentylnyl, 3-pentylnyl, 2-pentyl, 3-pentyl, 2-methylbutyl, 2-methyl-2-butenyl, 3-methylbutyl, 3-methyl-2-butenyl, 1-hexyl, 2-hexenyl, 10 3-hexenyl, 4-hexenyl, 2-hexynyl, 3-hexynyl, 4-hexynyl, 2-hexyl, 1-methyl-2-pentenyl, 1-methyl-3-pentenyl, 1-methyl-2-pentylnyl, 1-methyl-3-pentylnyl, 3-hexyl, 1-ethyl-2-butenyl, 1-heptyl, 2-heptenyl, 3-heptenyl, 4-heptenyl, 5-heptenyl, 2-heptylnyl, 3-heptylnyl, 4-heptylnyl, 5-heptylnyl, 2-heptyl, 1-methyl-2-hexenyl, 1-methyl-3-hexenyl, 15 1-methyl-4-hexenyl, 1-methyl-2-hexynyl, 1-methyl-3-hexynyl, 1-methyl-4-hexynyl, 3-heptyl, 1-ethyl-2-pentenyl, 1-ethyl-3-pentenyl, 1-ethyl-2-pentylnyl, 1-ethyl-3-pentylnyl, 2,2,2-trifluoroethyl, 2,2-difluoropropyl, 4-trifluoromethyl-5,5,5-trifluoropentyl, 4-trifluoromethylpentyl, 5,5,6,6,6-pentafluorohexyl, and 3,3,3-trifluoropropyl, wherein each member of 20 group B is optionally substituted at any carbon up to and including 5 atoms from the point of attachment of B to A with one or more of the group consisting of R<sup>32</sup>, R<sup>33</sup>, R<sup>34</sup>, R<sup>35</sup>, and R<sup>36</sup>;

- B is optionally selected from the group consisting of cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, cycloheptyl, oxalan-2-yl, 25 2-(2R)-bicyclo[2.2.1]-heptyl, oxetan-3-yl, azetidin-1-yl, azetidin-2-yl, azetidin-3-yl, bicyclo[3.1.0]hexan-6-yl, 2-morpholinyl, 3-morpholinyl, 4-morpholinyl, 1-piperazinyl, 2-piperazinyl, 1-piperidinyl, 2-piperidinyl, 3-piperidinyl, 4-piperidinyl, 1-pyrrolidinyl, 2-pyrrolidinyl, 3-pyrrolidinyl, 2-dioxanyl, 2-tetrahydrofuranyl, 3-tetrahydrofuranyl, 2-tetrahydropyranyl, 30 3-tetrahydropyranyl, 4-tetrahydropyranyl, 2-tetrahydrothienyl, and 3-tetrahydrothienyl, wherein each ring carbon is optionally substituted with R<sup>33</sup>, ring carbons and a nitrogen adjacent to the carbon atom at the point of attachment are optionally substituted with R<sup>9</sup> or R<sup>13</sup>, a ring carbon or nitrogen

adjacent to the  $R^9$  position and two atoms from the point of attachment is optionally substituted with  $R^{10}$ , and a ring carbon or nitrogen adjacent to the  $R^{13}$  position and two atoms from the point of attachment is optionally substituted with  $R^{12}$ ;

- 5  $R^9$ ,  $R^{11}$ , and  $R^{13}$  are independently selected from the group consisting of hydrido, methyl, ethyl, methoxy, ethoxy, hydroxy, amino, N-methylamino, N,N-dimethylamino, methylthio, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, fluoro, chloro, bromo, amidosulfonyl, N-methylamid sulfonyl, N,N-dimethylamid sulfonyl, hydroxymethyl, 10 1-hydroxyethyl, amidocarbonyl, N-methylamidocarbonyl, carboxy, and cyano;  $R^{10}$  and  $R^{12}$  are independently selected from the group consisting of hydrido, amidino, amidocarbonyl, N-methylamidocarbonyl, N-benzylamidocarbonyl, N-(2-chlorobenzyl)amidocarbonyl, N-(3-fluorobenzyl)amidocarbonyl, N-(2-trifluoromethylbenzyl)amidocarbonyl, 15 N-(1-phenylethyl)amidocarbonyl, N-(1-methyl-1-phenylethyl)amidocarbonyl, N-benzylamid sulfonyl, N-(2-chlorobenzyl)amid sulfonyl, N-ethylamidocarbonyl, N-isopropylamidocarbonyl, N-propylamidocarbonyl, N-isobutylamidocarbonyl, N-(2-butyl)amidocarbonyl, N-cyclobutylamidocarbonyl, N-cyclopentylamidocarbonyl, 20 N-cyclohexylamidocarbonyl, guanidino, methyl, ethyl, methoxy, ethoxy, hydroxy, hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl, carboxy, carboxymethyl, amino, acetamido, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, trifluoroacetamido, aminomethyl, N-methylamino, dimethylamino, methoxyamino, amidosulfonyl, N-methylamid sulfonyl, 25 N,N-dimethylamid sulfonyl, methanesulfonamido, methoxycarbonyl, fluoro, chloro, bromo, and cyano;

A is selected from the group consisting of a bond, NH,  $N(CH_3)$ ,  $CH_2$ ,  $CH_3CH$ ,  $CH_2CH_2$ , and  $CH_2CH_2CH_2$ ;

- $R^1$  and  $X^O$  are independently selected from the group consisting of 30 hydrido, hydroxy, hydroxymethyl, amino, aminomethyl, methylamino, cyano,

methyl, trifluoromethyl, methoxy, methylthio, trifluoromethoxy, fluoro, and chloro;

$R^2$  is  $Z^0$ -Q;

$Z^0$  is selected from the group consisting of a bond, O, S, NH,  $OCH_2$ ,

5  $SCH_2$ , and  $N(H)CH_2$ ;

Q is selected from the group consisting of phenyl, 2-thienyl, 2-furyl, 2-pyrrolyl, 2-imidazolyl, 2-thiazolyl, 3-isoxazolyl, 2-pyridyl, and 3-pyridyl, wherein a carbon adjacent to the carbon at the point of attachment of said phenyl or heteroaryl ring to  $Z^0$  is optionally substituted by  $R^9$ , the other carbon

10 adjacent to the carbon at the point of attachment is optionally substituted by  $R^{13}$ , a carbon adjacent to  $R^9$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{10}$ , a carbon adjacent to  $R^{13}$  and two atoms from the carbon at the point of attachment is optionally substituted by  $R^{12}$ , and any carbon adjacent to both  $R^{10}$  and  $R^{12}$  is optionally substituted by

15  $R^{11}$ , with the proviso that Q is other than a phenyl when  $Z^0$  is a bond;

$Y^{AT}$  is  $Q^b$ - $Q^s$ ;

$Q^s$  is selected from the group consisting of:

$C[R^{37}(\text{benzoyl})(CR^{37}R^{38})_b]$ ,

$C[R^{37}(2\text{-pyridylcarbonyl})(CR^{37}R^{38})_b]$ ,

20  $C[R^{37}(3\text{-pyridylcarbonyl})(CR^{37}R^{38})_b]$ ,

$C[R^{37}(4\text{-pyridylcarbonyl})(CR^{37}R^{38})_b]$ ,

$C[R^{37}(2\text{-thienylcarbonyl})(CR^{37}R^{38})_b]$ ,

$C[R^{37}(3\text{-thienylcarbonyl})(CR^{37}R^{38})_b]$ ,

$C[R^{37}(2\text{-thiazolylcarbonyl})(CR^{37}R^{38})_b]$ ,

$C[R^{37}(4\text{-thiazolylcarbonyl})(CR^{37}R^{38})_b]$ , and

$C[R^{37}(5\text{-thiazolylcarbonyl})(CR^{37}R^{38})_b]$ , wherein  $b$  is an integer selected

from 1 through 3,  $R^{37}$  and  $R^{38}$  are independently selected from the group consisting of hydrido, alkyl, and haloalkyl, with the proviso that said benzoyl and the heteroaroyls are optionally substituted with one or more substituents selected from the group consisting of  $R^{16}$ ,  $R^{17}$ ,  $R^{18}$ , and  $R^{19}$  with the proviso that  $R^{17}$  and  $R^{18}$  are optionally substituted at a carbon selected from other than the meta and para carbons relative to the carbonyl of the benzoyl or heteroaroyl, with the further proviso that said benzoyl or said heteroaroyl are bonded to the carbon directly bonded to amide nitrogen of the 1-(amidocarbonylmethylene) group, and with the still further proviso that is no more than one alkyl or one haloalkyl is bonded to a  $CR^{37}R^{38}$  at the same time;

$R^{16}$ ,  $R^{17}$ ,  $R^{18}$ , and  $R^{19}$  are independently selected from the group consisting of hydrido, methyl, ethyl, amidino, guanidino, methoxy, hydroxy, amino, aminomethyl, 1-aminoethyl, 2-aminoethyl, N-methylamino, dimethylamino, methylthio, ethylthio, trifluoromethylthio, methylsulfinyl, methylsulfonyl, trifluoromethyl, pentafluoroethyl, 2,2,2-trifluoroethyl, trifluoromethoxy, fluoro, chloro, hydroxymethyl, carboxy, and cyano;

$Q^b$  is  $C(NR^{25})NR^{23}R^{24}$  or  $N(R^{26})C(NR^{25})N(R^{23})(R^{24})$ ;

$R^{23}$ ,  $R^{24}$ ,  $R^{25}$ , and  $R^{26}$  are independently selected from the group consisting of hydrido, methyl, and ethyl.

43. Compound of Claim 42 or a pharmaceutically acceptable salt thereof, wherein;

$B$  is selected from the group consisting of 2-aminophenyl, 3-aminophenyl, 3-amidinophenyl, 4-amidinophenyl, 3-carboxyphenyl, 3-carboxy-5-hydroxyphenyl, 3-chlorophenyl, 4-chlorophenyl, 3,4-dichlorophenyl, 2-fluorophenyl, 3-fluorophenyl, 3,4-difluorophenyl, 3-hydroxyphenyl, 4-hydroxyphenyl, 3-methoxyaminophenyl,

3-methoxyphenyl, 4-methoxyphenyl, 3-methylphenyl, 4-methylphenyl, phenyl, 3-trifluoromethylphenyl, 2-imidazolyl, 2-pyridyl, 3-pyridyl, 5-chloro-3-trifluoromethyl-2-pyridyl, 4-pyridyl, 2-thienyl, 3-thienyl, and 3-trifluoromethyl-2-pyridyl;

- 5 B is optionally selected from the group consisting of hydrido, ethyl, 2-propenyl, 2-propynyl, propyl, isopropyl, butyl, 2-butyl, (R)-2-butyl, (S)-2-butyl, tert-butyl, isobutyl, 1-pentyl, 3-pentyl, 2-methylbutyl, 2,2,2-trifluoroethyl, 6-amidocarbonylhexyl, 4-methyl-2-pentyl, 3-hydroxypropyl, 1-methoxy-2-propyl, 2-methoxyethyl, 2-methyl-2-butyl, 10 3-methyl-2-butyl, 2-dimethylaminopropyl, 2-cyanoethyl, 6-hydroxyhexyl, 2-hydroxyethyl, 2-amidinoethyl, 2-guanidinoethyl, 3-guanidinopropyl, 4-guanidinobutyl, 3-hydroxypropyl, 4-hydroxybutyl, 6-cyanoethyl, 2-dimethylaminoethyl, 3-methylbutyl, 2-methylbutyl, (S)-2-methylbutyl, 3-aminopropyl, 2-hexyl, and 4-aminobutyl;

- 15 B is optionally selected from the group consisting of cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, oxalan-2-yl, 2-(2R)-bicyclo[2.2.1]-heptyl, oxetan-3-yl, azetidin-1-yl, azetidin-2-yl, azetidin-3-yl, 1-pyrrolidinyl and 1-piperidinyl;

A is selected from the group consisting of a bond,  $\text{CH}_2$ ,  $\text{CH}_3\text{CH}$ ,

- 20  $\text{CH}_2\text{CH}_2$ , and  $\text{CH}_2\text{CH}_2\text{CH}_2$ ;

$\text{R}^1$  and  $\text{X}^0$  are independently selected from the group consisting of hydrido, hydroxy, hydroxymethyl, amino, aminomethyl, cyano, methyl, trifluoromethyl, fluoro, and chloro;

$\text{R}^2$  is  $\text{Z}^0\text{-Q}$ ;

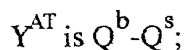
- 25  $\text{Z}^0$  is selected from the group consisting of a bond, O, S, NH, and  $\text{OCH}_2$ ;

Q is selected from the group consisting of

- 3-amidocarbonyl-5-aminophenyl, 3-amidocarbonyl-5-aminophenyl, 3-amino-5-(N-benzylamidocarbonyl)phenyl, 30 3-amino-5-(N-(2-chlorobenzyl)amidocarbonyl)phenyl, 3-amino-5-(N-(3-fluorobenzyl)amidocarbonyl)phenyl, 3-amino-5-(N-(2-trifluoromethylbenzyl)amidocarbonyl)phenyl, 3-amino-5-(N-(1-phenylethyl)amidocarbonyl)phenyl,



- 3-amino-5-(N-(1-methyl-1-phenylethyl)amidocarbonyl)phenyl,  
 3-amino-5-(N-benzylamidosulfonyl)phenyl,  
 3-amino-5-(N-(2-chlorobenzyl)amidosulfonyl)phenyl,  
 3-amino-5-(N-ethylamidocarbonyl)phenyl,  
 5 3-amino-5-(N-isopropylamidocarbonyl)phenyl,  
 3-amino-5-(N-propylamidocarbonyl)phenyl,  
 3-amino-5-(N-isobutylamidocarbonyl)phenyl,  
 3-amino-5-(N-(2-butyl)amidocarbonyl)phenyl,  
 3-amino-5-(N-cyclobutylamidocarbonyl)phenyl,  
 10 3-amino-5-(N-cyclopentylamidocarbonyl)phenyl,  
 3-amino-5-(N-cyclohexylamidocarbonyl)phenyl, 5-amino-2-fluorophenyl,  
 3-amino-5-hydroxymethylphenyl, 5-amino-3-methoxycarbonylphenyl,  
 3-amidinophenyl, 3-amino-2-methylphenyl, 5-amino-2-methylthiophenyl,  
 3-aminophenyl, 3-carboxyphenyl, 3-carboxy-5-aminophenyl,  
 15 3-carboxy-5-hydroxyphenyl, 3-carboxymethyl-5-aminophenyl,  
 3-carboxymethyl-5-hydroxyphenyl, 3-carboxymethylphenyl, 3-chlorophenyl,  
 2-chlorophenyl, 3-cyanophenyl, 3,5-diaminophenyl, 3-dimethylaminophenyl,  
 2-fluorophenyl, 3-fluorophenyl, 2,5-difluorophenyl, 2-hydroxyphenyl,  
 3-hydroxyphenyl, 3-methanesulfonylaminophenyl, 2-methoxyphenyl,  
 20 3-methoxyphenyl, 3-methoxyaminophenyl, 3-methoxycarbonylphenyl,  
 2-methylaminophenyl, 3-methylaminophenyl, 2-methylphenyl, 3-methylphenyl,  
 4-methylphenyl, phenyl, 3-trifluoroacetamidophenyl, 3-trifluoromethylphenyl,  
 2-trifluoromethylphenyl, 5-amino-2-thienyl, 5-amino-3-thienyl,  
 3-bromo-2-thienyl, 3-pyridyl, 4-pyridyl, 2-thienyl, and 3-thienyl, with the  
 25 proviso that Q is other than a phenyl or a substituted phenyl when Z<sup>0</sup> is a bond;



Q<sup>s</sup> is selected from the group consisting of:

- [CH(benzoyl)](CH<sub>2</sub>)<sub>b</sub>, [CH(2-pyridylcarbonyl)](CH<sub>2</sub>)<sub>b</sub>,  
 [CH(3-pyridylcarbonyl)](CH<sub>2</sub>)<sub>b</sub>, [CH(4-pyridylcarbonyl)](CH<sub>2</sub>)<sub>b</sub>,  
 30 [CH(2-thienylcarbonyl)](CH<sub>2</sub>)<sub>b</sub>, [CH(3-thienylcarbonyl)](CH<sub>2</sub>)<sub>b</sub>,  
 [CH(2-thiazolylcarbonyl)](CH<sub>2</sub>)<sub>b</sub>, [CH(4-thiazolylcarbonyl)](CH<sub>2</sub>)<sub>b</sub>,

and  $[\text{CH}(\text{5-thiazolylcarbonyl})](\text{CH}_2)_b$ , wherein  $b$  is an integer selected from 1 through 3, with the proviso that said benzoyl and said heteroaroyls are optionally substituted with one or more substituents selected from the group consisting of  $\text{R}^{16}$ ,  $\text{R}^{17}$ ,  $\text{R}^{18}$ , and  $\text{R}^{19}$  with the proviso that  $\text{R}^{17}$  and  $\text{R}^{18}$  are optionally substituted at a carbon selected from other than the meta and para carbons relative to the carbonyl of the benzoyl or the heteroaroyl, and that said benzoyl or said heteroaroyl are bonded to the carbon directly bonded to amide nitrogen of the 1-(amidocarbonylmethylene) group;

$\text{R}^{16}$  and  $\text{R}^{19}$  are independently selected from the group consisting of

hydrido, amidino, amino, aminomethyl, methoxy, methylamino, hydroxy, hydroxymethyl, fluoro, chloro, and cyano;

$\text{R}^{17}$  and  $\text{R}^{18}$  are independently selected from the group consisting of hydrido, fluoro, chloro, hydroxy, hydroxymethyl, amino, carboxy, and cyano;

$\text{Q}^b$  is  $\text{N}(\text{R}^{26})\text{C}(\text{NR}^{25})\text{N}(\text{R}^{23})(\text{R}^{24})$ ;

$\text{R}^{23}$ ,  $\text{R}^{24}$ ,  $\text{R}^{25}$ , and  $\text{R}^{26}$  are independently hydrido or methyl.

44. Compound of Claim 43 or a pharmaceutically acceptable salt thereof, wherein;

$B$  is selected from the group consisting of 3-aminophenyl,

3-amidinophenyl, 4-amidinophenyl, 3-chlorophenyl, 4-chlorophenyl, 3,4-dichlorophenyl, 2-fluorophenyl, 4-methylphenyl, phenyl, 2-imidazolyl, 3-pyridyl, 4-pyridyl, and 3-trifluoromethyl-2-pyridyl;

$B$  is optionally selected from the group consisting of hydrido, ethyl,

2-propenyl, 2-propynyl, propyl, isopropyl, butyl, 2-butyl, (R)-2-butyl, (S)-2-butyl, tert-butyl, isobutyl, 1-pentyl, 3-pentyl, 2-methylbutyl, 2,2,2-trifluoroethyl, 6-amidocarbonylhexyl, 4-methyl-2-pentyl, 3-hydroxypropyl, 1-methoxy-2-propyl, 2-methoxyethyl, 2-methyl-2-butyl, 3-methyl-2-butyl, 2-dimethylaminopropyl, 2-cyanoethyl, 6-hydroxyhexyl, 2-hydroxyethyl, 2-amidinoethyl, 2-guanidinoethyl, 3-guanidinopropyl, 4-guanidinobutyl, 3-hydroxypropyl, 4-hydroxybutyl, 6-cyanoethyl, 2-dimethylaminoethyl, 3-methylbutyl, 2-methylbutyl, (S)-2-methylbutyl,

3-aminopropyl, 2-hexyl, and 4-aminobutyl;

B is optionally selected from the group consisting of cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, oxalan-2-yl, 2-(2R)-bicyclo[2.2.1]-heptyl, oxetan-3-yl, azetidin-1-yl, azetidin-2-yl, azetidin-3-yl, and 1-piperidinyl;

- 5           A is selected from the group consisting of a bond,  $\text{CH}_2$ ,  $\text{CH}_2\text{CH}_2$  and  $\text{CH}_2\text{CH}_2\text{CH}_2$ ;

$\text{X}^0$  is selected from the group consisting of hydrido, hydroxy, hydroxymethyl, amino, aminomethyl, cyano, methyl, trifluoromethyl, and fluoro;

- 10            $\text{R}^1$  is selected from the group consisting of hydrido, hydroxy, hydroxymethyl, amino, aminomethyl, cyano, methyl, trifluoromethyl, and fluoro;

$\text{R}^2$  is  $\text{Z}^0\text{-Q}$ ;

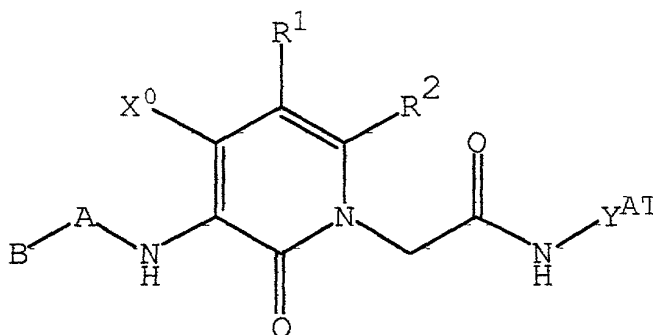
$\text{Z}^0$  is selected from the group consisting of a bond, O, S, and NH;

- 15           Q is selected from the group consisting of  
 3-amidocarbonyl-5-aminophenyl, 3-amino-5-(N-benzylamidocarbonyl)phenyl,  
 3-amino-5-(N-(2-chlorobenzyl)amidocarbonyl)phenyl,  
 3-amino-5-(N-(3-fluorobenzyl)amidocarbonyl)phenyl,  
 3-amino-5-(N-(2-trifluoromethylbenzyl)amidocarbonyl)phenyl,  
 20   3-amino-5-(N-(1-phenylethyl)amidocarbonyl)phenyl,  
 3-amino-5-(N-(1-methyl-1-phenylethyl)amidocarbonyl)phenyl,  
 3-amino-5-(N-benzylamididosulfonyl)phenyl,  
 3-amino-5-(N-(2-chlorobenzyl)amididosulfonyl)phenyl,  
 3-amino-5-(N-ethylamidocarbonyl)phenyl,  
 25   3-amino-5-(N-isopropylamidocarbonyl)phenyl,  
 3-amino-5-(N-propylamidocarbonyl)phenyl,  
 3-amino-5-(N-isobutylamidocarbonyl)phenyl,  
 3-amino-5-(N-(2-butyl)amidocarbonyl)phenyl,  
 3-amino-5-(N-cyclobutylamidocarbonyl)phenyl,  
 30   3-amino-5-(N-cyclopentylamidocarbonyl)phenyl,  
 3-amino-5-(N-cyclohexylamidocarbonyl)phenyl, 3-aminophenyl,  
 3-carboxy-5-aminophenyl, 3-chlorophenyl, 3,5-diaminophenyl,  
 3-dimethylaminophenyl, 3-hydroxyphenyl, 3-methanesulfonylaminophenyl,

3-methylaminophenyl, 2-methylphenyl, 3-methylphenyl, phenyl, 3-trifluoroacetamidophenyl, 3-bromo-2-thienyl, 2-thienyl, and 3-thienyl, with the proviso that Q is other than a phenyl or a substituted phenyl when  $Z^0$  is a bond;

- 5  $Y^{AT}$  is selected from the group consisting of 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl, 5-guanidino-1-oxo-1-(4-thiazolyl)-2-pentyl, 5-guanidino-1-oxo-1-(5-thiazolyl)-2-pentyl, 5-guanidino-1-oxo-1-(4-amino-2-thiazolyl)-2-pentyl, and 5-guanidino-1-oxo-1-phenyl-2-pentyl.

- 10 45. A compound as recited in Claim 41 where said compound is selected from the group of the Formula:



or a pharmaceutically acceptable salt thereof, wherein;

- $R^2$  is 3-aminophenoxy, B is phenyl, A is  $CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is hydroxymethyl, and  $X^0$  is hydrido;
- 15  $R^2$  is phenoxy, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is hydroxymethyl, and  $X^0$  is hydrido;
- $R^2$  is benzyloxy, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is hydroxymethyl, and  $X^0$  is hydrido;
- 20  $R^2$  is phenoxy, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is hydroxymethyl, and  $X^0$  is hydrido;
- $R^2$  is benzylamino, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is hydroxymethyl, and  $X^0$  is hydrido;

- $R^2$  is phenoxy, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is hydroxymethyl, and  $X^O$  is hydrido;
- $R^2$  is 3-aminophenoxy, B is phenyl, A is  $CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is aminomethyl, and  $X^O$  is fluoro;
- 5  $R^2$  is phenoxy, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is aminomethyl, and  $X^O$  is fluoro;
- $R^2$  is benzylthio, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is aminomethyl, and  $X^O$  is fluoro;
- $R^2$  is phenoxy, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is aminomethyl, and  $X^O$  is fluoro;
- 10  $R^2$  is benzyloxy, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is aminomethyl, and  $X^O$  is fluoro;
- $R^2$  is phenoxy, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is aminomethyl, and  $X^O$  is fluoro;
- 15  $R^2$  is 3-aminophenoxy, B is phenyl, A is  $CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is fluoro, and  $X^O$  is hydroxymethyl;
- $R^2$  is phenoxy, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is fluoro, and  $X^O$  is hydroxymethyl;
- $R^2$  is benzylamino, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is fluoro, and  $X^O$  is hydroxymethyl;
- 20  $R^2$  is phenoxy, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is fluoro, and  $X^O$  is hydroxymethyl;
- $R^2$  is phenylthio, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is fluoro, and  $X^O$  is hydroxymethyl;

$R^2$  is phenoxy, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is fluoro, and  $X^O$  is hydroxymethyl;

$R^2$  is 3-aminophenoxy, B is phenyl, A is  $CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is methoxy, and  $X^O$  is aminomethyl;

5  $R^2$  is phenoxy, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is methoxy, and  $X^O$  is aminomethyl;

$R^2$  is benzyloxy, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is methoxy, and  $X^O$  is aminomethyl;

10  $R^2$  is phenoxy, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is methoxy, and  $X^O$  is aminomethyl;

$R^2$  is benzylthio, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is methoxy, and  $X^O$  is aminomethyl;

$R^2$  is phenoxy, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is methoxy, and  $X^O$  is aminomethyl;

15  $R^2$  is 3-aminophenoxy, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is aminomethyl, and  $X^O$  is chloro;

$R^2$  is 3-aminophenoxy, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

20  $R^2$  is 3,5-diaminophenoxy, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-carboxy-5-aminophenoxy, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-benzylamidocarbonyl)phenoxy, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  
25  $X^O$  is hydrido;

$R^2$  is 3,5-diaminophenoxy, B is isopropyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-carboxy-5-aminophenoxy, B is isopropyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

5  $R^2$  is 3-amino-5-(N-benzylamidocarbonyl)phenoxy, B is isopropyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3,5-diaminophenoxy, B is cyclobutyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

10  $R^2$  is 3-carboxy-5-aminophenoxy, B is cyclobutyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-benzylamidocarbonyl)phenoxy, B is cyclobutyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido.

15  $R^2$  is 3-aminophenylthio, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3,5-diaminophenylthio, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

20  $R^2$  is 3-carboxy-5-aminophenylthio, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-benzylamidocarbonyl)phenylthio, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

25  $R^2$  is 3,5-diaminophenylthio, B is isopropyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-carboxy-5-aminophenylthio, B is isopropyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-benzylamidocarbonyl)phenylthio, B is isopropyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and

5  $X^O$  is hydrido;

$R^2$  is 3,5-diaminophenylthio, B is cyclobutyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-carboxy-5-aminophenylthio, B is cyclobutyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

10  $R^2$  is 3-amino-5-(N-benzylamidocarbonyl)phenylthio, B is cyclobutyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-2-thienyl, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

15  $R^2$  is 3,5-diamino-2-thienyl, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-carboxy-5-amino-2-thienyl, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

20  $R^2$  is 3-amino-5-(N-benzylamidocarbonyl)-2-thienyl, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3,5-diamino-2-thienyl, B is isopropyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

25  $R^2$  is 3-carboxy-5-amino-2-thienyl, B is isopropyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;



$R^2$  is 3-amino-5-(N-benzylamidocarbonyl)-2-thienyl, B is isopropyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3,5-diamino-2-thienyl, B is cyclobutyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-carboxy-5-amino-2-thienyl, B is cyclobutyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-benzylamidocarbonyl)-2-thienyl, B is cyclobutyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido.

46. A composition for inhibiting thrombotic conditions in blood comprising a compound of any one of Claims 8, 16, 24, 32, 40, and 45 and a pharmaceutically acceptable carrier.

47. A composition for inhibiting thrombotic conditions in blood comprising a compound of any one of Claims 1 through 7, Claims 9 through 15, Claims 17 through 23, Claims 25 through 31, Claims 33 through 39, and Claims 41 through 44 and a pharmaceutically acceptable carrier.

48. A method for inhibiting thrombotic conditions in blood comprising adding to blood a therapeutically effective amount of a composition of any one of Claims 46 and 47.

49. A method for inhibiting formation of blood platelet aggregates in blood comprising adding to blood a therapeutically effective amount of a composition of any one of Claims 46 and 47.

50. A method for inhibiting thrombus formation in blood comprising adding to blood a therapeutically effective amount of a composition of any one of Claims 46 and 47.

51. A method for treating or preventing venous thromboembolism and pulmonary embolism in a mammal comprising administering to the mammal a therapeutically effective amount of a composition of any one of Claims 46 and 47.

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52. A method for treating or preventing deep vein thrombosis in a mammal comprising administering to the mammal a therapeutically effective amount of a composition of any one of Claims 46 and 47.

10 53. A method for treating or preventing cardiogenic thromboembolism in a mammal comprising administering to the mammal a therapeutically effective amount of a composition of any one of Claims 46 and 47.

15 54. A method for treating or preventing thromboembolic stroke in humans and other mammals comprising administering to the mammal a therapeutically effective amount of a composition of any one of Claims 46 and 47.

20 55. A method for treating or preventing thrombosis associated with cancer and cancer chemotherapy in humans and other mammals comprising administering to the mammal a therapeutically effective amount of a composition of any one of Claims 46 and 47.

25 56. A method for treating or preventing unstable angina in humans and other mammals comprising administering to the mammal a therapeutically effective amount of a composition of any one of Claims 46 and 47.

30 57. A method for inhibiting thrombus formation in blood comprising adding to blood a therapeutically effective amount of a compound of any one of Claims 1 through 45 with a therapeutically effective amount of fibrinogen receptor antagonist.

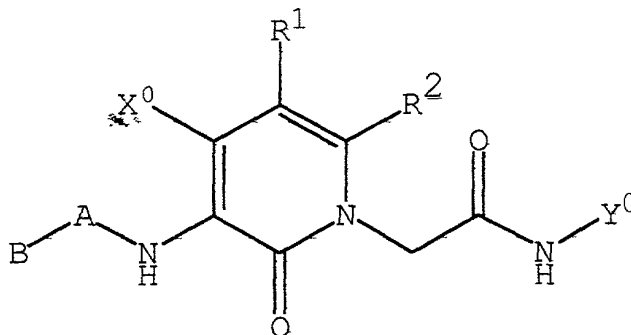
35 58. The use of a compound of any one of Claims 1 through 45, or a pharmaceutically acceptable salt thereof, in the manufacture of medicament for inhibiting thrombus formation, treating thrombus formation, or preventing thrombus formation in a mammal.

59. A method of treating or preventing a TF VIIA-mediated disorder in a subject by administering a therapeutically effective amount of a compound or a pharmaceutically acceptable salt thereof, said compound selected from the group consisting of:

- 5 N-[[4-aminoiminomethylphenyl]methyl]-2-[1-[6-[3-aminophenyl]-4-chloro-3-[N,N-dimethylhydrazino]-2-oxo-1(2H)-pyridinyl]]acetamide;
- N-[[4-aminoiminomethylphenyl]methyl]-2-[1-[6-[3-aminophenyl]-3-[N-ethyl-N-methylhydrazino]-4-fluoro-2-oxo-1(4H)-pyridinyl]]acetamide;
- 10 N-[[4-aminoiminomethylphenyl]methyl]-2-[1-[6-[3-aminophenyl]-3-[N,N-diethylhydrazino]-2-oxo-1(4H)-pyridinyl]]acetamide;
- N-[[4-aminoiminomethylphenyl]methyl]-4-chloro-2-[1-[6-[3,5-diaminophenyl]-3-[N,N-dimethylhydrazino]-2-oxo-1(2H)-pyridinyl]]acetamide;
- 15 N-[[4-aminoiminomethylphenyl]methyl]-2-[1-[6-[3-aminophenyl]-3-[N,N-dimethylhydrazino]-2-oxo-1(2H)-pyridinyl]]acetamide;
- N-[[4-aminoiminomethylphenyl]methyl]-2-[1-[6-[3-aminophenyl]-3-[N,N-dimethylhydrazino]-4-fluoro-2-oxo-1(2H)-pyridinyl]]acetamide;
- N-[[4-aminoiminomethylphenyl]methyl]-2-[1-[6-[3-amino-5-
- 20 carboxyphenyl]-4-chloro-3-[N,N-dimethylhydrazino]-2-oxo-1(2H)-pyridinyl]]acetamide;
- N-[[4-aminoiminomethylphenyl]methyl]-2-[1-[6-[3,5-diaminophenyl]-3-[N-ethyl-N-methylhydrazino]-4-fluoro-2-oxo-1(4H)-pyridinyl]]acetamide;
- N-[[4-aminoiminomethylphenyl]methyl]-2-[1-[6-[3,5-diaminophenyl]-3-[N,N-diethylhydrazino]-2-oxo-1(4H)-pyridinyl]]acetamide;
- 25 N-[[4-aminoiminomethylphenyl]methyl]-4-chloro-2-[1-[6-[3,5-diaminophenyl]-3-[N,N-dimethylhydrazino]-2-oxo-1(2H)-pyridinyl]]acetamide;
- N-[[4-aminoiminomethylphenyl]methyl]-2-[1-[6-[3-amino-5-
- 30 carboxyphenyl]-3-[N,N-dimethylhydrazino]-2-oxo-1(2H)-pyridinyl]]acetamide;
- N-[[4-aminoiminomethylphenyl]methyl]-2-[1-[6-[3-amino-5-carboxyphenyl]-3-[N,N-dimethylhydrazino]-4-fluoro-2-oxo-1(2H)-pyridinyl]]acetamide.

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60. A method of treating or preventing a TF VIIA-mediated disorder in a subject by administering a therapeutically effective amount of a compound or a pharmaceutically acceptable salt thereof, said compound of the formula:



5 wherein;

$R^2$  is 3-aminophenyl, B is 3-chlorophenyl, A is  $\text{CH}_2\text{CH}_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is phenyl, A is  $\text{CH}_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

10  $R^2$  is phenyl, B is 3-chlorophenyl, A is  $\text{CH}_2\text{CH}_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-dimethylaminophenyl, B is phenyl, A is  $\text{CH}_2\text{CH}_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

15  $R^2$  is 2-methylphenyl, B is phenyl, A is  $\text{CH}_2\text{CH}_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is phenyl, B is 3-aminophenyl, A is  $\text{C(O)NH}$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amidocarbonyl-5-aminophenyl, B is 3-chlorophenyl, A is  $\text{CH}_2\text{CH}_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

20  $R^2$  is 3-amino-5-(N-benzylamidocarbonyl)phenyl, B is 3-chlorophenyl, A is  $\text{CH}_2\text{CH}_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidocarbonyl)phenyl, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

5  $R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidosulfonyl)phenyl, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-trifluoromethylbenzyl)amidocarbonyl)-phenyl, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

10  $R^2$  is 3,5-diaminophenyl, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxyphenyl, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

15  $R^2$  is 3-amidocarbonyl-5-aminophenyl, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-benzylamidocarbonyl)phenyl, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

20  $R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidocarbonyl)phenyl, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidosulfonyl)phenyl, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

25  $R^2$  is 3-amino-5-(N-(2-trifluoromethylbenzyl)amidocarbonyl)-phenyl, B is 3-chlorophenyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3,5-diaminophenyl, B is 3-chlorophenyl, A is  $\text{CH}_2\text{CH}_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxyphenyl, B is 3-chlorophenyl, A is  $\text{CH}_2\text{CH}_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

5  $R^2$  is 3-aminophenyl, B is 2,2,2-trifluoroethyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is (S)-2-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

10  $R^2$  is 5-amino-2-fluorophenyl, B is isopropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 2-methyl-3-aminophenyl, B is isopropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is ethyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

15  $R^2$  is 3-aminophenyl, B is ethyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is 2-propenyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

20  $R^2$  is 3-aminophenyl, B is isopropyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is isopropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is 2-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

25  $R^2$  is 3-aminophenyl, B is (R)-2-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is 2-propynyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is 3-pentyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

5  $R^2$  is 3-aminophenyl, B is hydrido, A is  $CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is ethyl, A is  $CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

10  $R^2$  is 3-aminophenyl, B is 2-methylpropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is 2-propyl, A is  $CH_3CH$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is propyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

15  $R^2$  is 3-aminophenyl, B is 6-amidocarbonylhexyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is tert-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

20  $R^2$  is 3-aminophenyl, B is tert-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is 3-hydroxypropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is 2-methylpropyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

25  $R^2$  is 3-aminophenyl, B is butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

- $R^2$  is 3-aminophenyl, B is 1-methoxy-2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;
- $R^2$  is 3-aminophenyl, B is 1-methoxy-2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;
- 5  $R^2$  is 3-aminophenyl, B is 2-methoxyethyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;
- $R^2$  is 3-aminophenyl, B is 2-propyl, A is single bond,  $Y^0$  is 5-amidino-2-thienylmethyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;
- $R^2$  is 3-aminophenyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidino-3-fluorobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;
- 10  $R^2$  is 3-carboxyphenyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;
- $R^2$  is 3-aminophenyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidino-3-fluorobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;
- 15  $R^2$  is 3-aminophenyl, B is 2,2,2-trifluoroethyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;
- $R^2$  is 3-aminophenyl, B is (S)-2-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;
- $R^2$  is 5-amino-2-fluorophenyl, B is isopropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;
- 20  $R^2$  is 2-methyl-3-aminophenyl, B is isopropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;
- $R^2$  is 3-aminophenyl, B is ethyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;
- 25  $R^2$  is 3-aminophenyl, B is ethyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;



$R^2$  is 3-aminophenyl, B is 2-propenyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is isopropyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

5  $R^2$  is 3-aminophenyl, B is isopropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is 2-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is (R)-2-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is 2-propynyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is 3-pentyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

15  $R^2$  is 3-aminophenyl, B is hydrido, A is  $CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is ethyl, A is  $CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is 2-methypropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is 2-propyl, A is  $CH_3CH$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is propyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

25  $R^2$  is 3-aminophenyl, B is 6-amidocarbonylhexyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is tert-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is tert-butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

- 5  $R^2$  is 3-aminophenyl, B is 3-hydroxypropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is 2-methylpropyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

- 10  $R^2$  is 3-aminophenyl, B is butyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is 1-methoxy-2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is 1-methoxy-2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

- 15  $R^2$  is 3-aminophenyl, B is 2-methoxyethyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is 2-propyl, A is single bond,  $Y^0$  is 5-amidino-2-thienylmethyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

- 20  $R^2$  is 3-aminophenyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidino-3-fluorobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 3-carboxyphenyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidino-3-fluorobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

- 25  $R^2$  is 3-amidocarbonyl-5-aminophenyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-benzylamidocarbonyl)phenyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidocarbonyl)phenyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

5  $R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidosulfonyl)phenyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-trifluoromethylbenzyl)amidocarbonyl)-phenyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

10  $R^2$  is 3,5-diaminophenyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxyphenyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amidocarbonyl-5-aminophenyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

15  $R^2$  is 3-amino-5-(N-benzylamidocarbonyl)phenyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidocarbonyl)phenyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

20  $R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidosulfonyl)phenyl B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-trifluoromethylbenzyl)amidocarbonyl)-phenyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

25  $R^2$  is 3,5-diaminophenyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxyphenyl, B is 2-propyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is cyclopropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

5  $R^2$  is 3-aminophenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

10  $R^2$  is 3-aminophenyl, B is cyclopropyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidino-3-fluorobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

15  $R^2$  is 3-aminophenyl, B is cyclopentyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 5-amino-2-thienyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

20  $R^2$  is 3-aminophenyl, B is cyclopropyl, A is  $CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is 2-(2R)-bicyclo[2.2.1]-heptyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is cyclopentyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

25  $R^2$  is 3-aminophenyl, B is cyclohexyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 2-hydroxyphenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is phenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

5  $R^2$  is 3-thienyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 2,6-dichlorophenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is aminomethyl, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is cyclopropyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydroxymethyl, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is hydroxymethyl, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydroxymethyl, and  $X^O$  is hydrido;

15  $R^2$  is 3-aminophenyl, B is cyclopropyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is hydroxymethyl, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydroxymethyl, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidino-3-fluorobenzyl,  $R^1$  is hydroxymethyl, and  $X^O$  is hydrido;

20  $R^2$  is 3-aminophenyl, B is cyclopentyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydroxymethyl, and  $X^O$  is hydrido;

$R^2$  is 5-amino-2-thienyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydroxymethyl, and  $X^O$  is hydrido;

25  $R^2$  is 3-aminophenyl, B is cyclopropyl, A is  $CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydroxymethyl, and  $X^O$  is hydrido;

$R^2$  is 3-aminophenyl, B is 2-(2R)-bicyclo[2.2.1]-heptyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydroxymethyl, and  $X^0$  is hydrido;

$R^2$  is 3-aminophenyl, B is cyclopentyl, A is single bond,  $Y^0$  is 4-amidino-2-fluorobenzyl,  $R^1$  is hydroxymethyl, and  $X^0$  is hydrido;

5  $R^2$  is 3-aminophenyl, B is cyclohexyl, A is  $CH_2CH_2$ ,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydroxymethyl, and  $X^0$  is hydrido;

$R^2$  is 2-hydroxyphenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydroxymethyl, and  $X^0$  is hydrido;

10  $R^2$  is phenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydroxymethyl, and  $X^0$  is hydrido;

$R^2$  is 3-thienyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydroxymethyl, and  $X^0$  is hydrido;

$R^2$  is 2,6-dichlorophenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydroxymethyl, and  $X^0$  is hydrido;

15  $R^2$  is 3-amidocarbonyl-5-aminophenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^0$  is hydrido;

$R^2$  is 3-amino-5-(N-benzylamidocarbonyl)phenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^0$  is hydrido;

20  $R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidocarbonyl)phenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^0$  is hydrido;

$R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidosulfonyl)phenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^0$  is hydrido;

25  $R^2$  is 3-amino-5-(N-(2-trifluoromethylbenzyl)amidocarbonyl)-phenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^0$  is hydrido;

$R^2$  is 3,5-diaminophenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-carboxyphenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

5  $R^2$  is 3-amidocarbonyl-5-aminophenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-benzylamidocarbonyl)phenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

10  $R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidocarbonyl)phenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

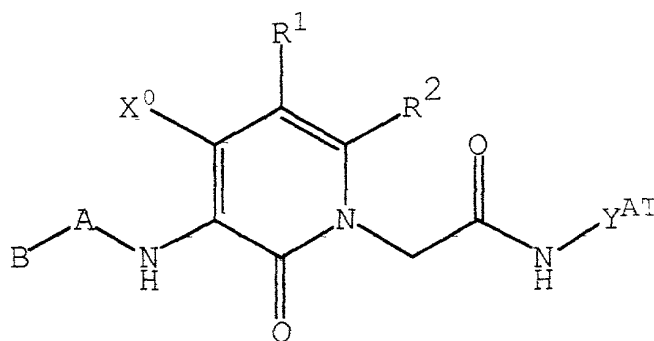
$R^2$  is 3-amino-5-(N-(2-chlorobenzyl)amidosulfonyl)phenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

15  $R^2$  is 3-amino-5-(N-(2-trifluoromethylbenzyl)amidocarbonyl)-phenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

$R^2$  is 3,5-diaminophenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido;

20  $R^2$  is 3-amino-5-carboxyphenyl, B is cyclobutyl, A is single bond,  $Y^0$  is 4-amidinobenzyl,  $R^1$  is hydrido, and  $X^O$  is hydrido.

61. A method of treating or preventing a TF VIIA-mediated disorder in a subject by administering a therapeutically effective amount of a compound or a  
25 pharmaceutically acceptable salt thereof, said compound of the formula:



wherein:

$R^2$  is 3-aminophenyl, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-

oxo-1-(2-thiazolyl)-2-pentyl, R<sup>1</sup> is aminomethyl, and X<sup>O</sup> is chloro;

5 R<sup>2</sup> is 3,5-diaminophenyl, B is phenyl, A is CH<sub>2</sub>CH<sub>2</sub>, Y<sup>AT</sup> is 5-guanidino-1-

oxo-1-(2-thiazolyl)-2-pentyl, R<sup>1</sup> is aminomethyl, and X<sup>o</sup> is chloro;

R<sup>2</sup> is 3-carboxy-5-aminophenyl, B is phenyl, A is CH<sub>2</sub>CH<sub>2</sub>, Y<sup>AT</sup> is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl, R<sup>1</sup> is aminomethyl, and X<sup>O</sup> is chloro;

R<sup>2</sup> is 3-amino-5-(N-benzylamidocarbonyl)phenyl, B is phenyl, A is  
 10 CH<sub>2</sub>CH<sub>2</sub>, Y<sup>AT</sup> is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl, R<sup>1</sup> is  
 aminomethyl, and X<sup>O</sup> is chloro;

$R^2$  is 3,5-diaminophenyl, B is isopropyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is aminomethyl, and  $X^O$  is chloro;

R<sup>2</sup> is 3-carboxy-5-aminophenyl, B is isopropyl, A is single bond, Y<sup>AT</sup> is 5-  
 15 guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl, R<sup>1</sup> is aminomethyl, and X<sup>O</sup> is chloro;

$R^2$  is 3-amino-5-(N-benzylamidocarbonyl)phenyl, B is isopropyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is aminomethyl, and  $X^O$  is chloro;

R<sup>2</sup> is 3,5-diaminophenyl, B is cyclobutyl, A is single bond, Y<sup>AT</sup> is 5-  
 20 guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl, R<sup>1</sup> is aminomethyl, and X<sup>O</sup> is chloro;



$R^2$  is 3-carboxy-5-aminophenyl, B is cyclobutyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is aminomethyl, and  $X^O$  is chloro;

$R^2$  is 3-amino-5-(N-benzylamidocarbonyl)phenyl, B is cyclobutyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is aminomethyl,

5 and  $X^O$  is chloro;

$R^2$  is 3-aminophenyl, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3,5-diaminophenyl, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

10  $R^2$  is 3-carboxy-5-aminophenyl, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-benzylamidocarbonyl)phenyl, B is phenyl, A is  $CH_2CH_2$ ,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

15  $R^2$  is 3,5-diaminophenyl, B is isopropyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-carboxy-5-aminophenyl, B is isopropyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

20  $R^2$  is 3-amino-5-(N-benzylamidocarbonyl)phenyl, B is isopropyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3,5-diaminophenyl, B is cyclobutyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

25  $R^2$  is 3-carboxy-5-aminophenyl, B is cyclobutyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido;

$R^2$  is 3-amino-5-(N-benzylamidocarbonyl)phenyl, B is cyclobutyl, A is single bond,  $Y^{AT}$  is 5-guanidino-1-oxo-1-(2-thiazolyl)-2-pentyl,  $R^1$  is chloro, and  $X^O$  is hydrido.

## Abstract

The invention relates to substituted polycyclic aryl and heteroaryl pyridone compounds useful as inhibitors of serine proteases of the coagulation cascade and compounds, compositions and methods for anticoagulant therapy for the treatment and prevention of a variety of thrombotic conditions including coronary artery and cerebrovascular diseases.